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# DRUG & CHEMICAL MARKETS

ESTABLISHED IN SEPTEMBER 1914 AS "WEEKLY DRUG MARKETS"

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VOL. V

NEW YORK, OCTOBER 2, 1918

No. 4

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# Dollars that Fight

By SENATOR HENRY CABOT LODGE

The war will be won by men and ships, by guns and airplanes. To raise armies and supply them, to build the navy and support it, and to furnish ships and transport, we must have money in large amounts. The expenditures of the Government for the ensuing year are estimated at \$24,000,000,000, a sum which baffles the imagination to conceive. That vast amount

must come one-third from taxes and two-thirds from loans. The success of the Fourth Loan, like those that preceded it is, therefore, absolutely necessary. We must work with the highest speed, as if the war was to end in six months. We must prepare in every direction, as if it was to last for years. Speed and preparation are both expensive

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We are fighting to secure a just, righteous and lasting peace. For a complete peace we must have a complete victory. It must not be a peace of bargain or negotiation. No peace which satisfies Germany can ever satisfy us. No peace that leaves Germany in a position to renew the war against us will be worth having. It will be far from sufficient to gain all our objects on the Western front - Belgium, Alsace-Lorraine, Italia Irredenta. The President with wisdom and foresight and great force expressed his determination to redeem Russia. Russia

must not be left in Germany's hands. That would mean another war. Poland must be free. Slav republics must be established to bar the way between Germany and the East. Serbia and Roumania must be redeemed. All these things are essential. *Nothing will bring them but complete victory and a peace dictated by us and our allies.* It is a conflict of ideas. It is the principle of evil arrayed against the principle of good. It is the battle of freedom and civilization against barbarism and tyranny. *We must win and we shall win.*

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### The N. A. R. D. Convention

The report of the recent meeting of the National Association of Retail Druggists held in New Orleans shows that the attendance was not as large as that of some of the meetings in previous years, owing to the scarcity of help and the consequent difficulty of would-be delegates finding competent hands in which to leave their stores, to say nothing of the increased cost of travel. The proceedings, however, were not devoid of interest, for the resolutions adopted show that most of the important problems now confronting the trade were considered and a line of action projected.

One of the most interesting resolutions, perhaps, is that declaring that boards of pharmacy should not be permitted to grant registration to persons as pharmacists who are not citizens of the United States or who have not taken out first papers showing their intention of becoming citizens. The fact that such individuals are not amenable to draft regulations and that they may continue in business to the detriment of citizens who are being constantly called to the colors, practically permits the boards under the various state laws to accord special privileges to persons not citizens when such privileges are denied to our own citizens.

Just how far such a rule would run counter to the rights of citizens of countries with which we have treaty arrangements we are unable to state, but there can be no question that registration should be withheld from subjects of alien nations, and from citizens of all countries which do not grant such privileges under similar conditions to American citizens.

### Australia's Economic Development

Importation of copra from Pacific Islands into Australia is now permitted. Prices of caustic soda and soda ash have been regulated. In the interest of manufacturers of medicinal preparations the ten per cent morphine standard for opium has been suspended for the duration of the war. Our Australian correspondent further announces plans under way for the manufacture of strychnine. If undertaken the nux vomica plant will be raised there. The necessity is seen in the plague of rabbits which have overrun New South Wales and Victoria. The United States restrictions on exports of phosphorus and strychnine have prevented the sheep men and farmers from obtaining supplies and the situation is serious.

The market will still be a good one for Amer-

ican chemicals, however, after the war. A leading firm of manufacturing pharmacists has just completed a laboratory at Sydney and will make their American products there. Australia at the same time has something to offer us. Experiments by the Commonwealth Institute of Science and Industry seem to indicate that mangrove bark can be used in place of wattle bark as a tanning material. If successful the substitution means a saving of about 40 per cent in the cost of tanning. It is claimed that the Institute has found a way to eliminate the strong odor and red coloring characteristic of leather tanned with mangrove bark.

The whole world has made economic discoveries as a result of the conditions brought about by the war. The truth of the saying that Necessity is the Mother of Invention has been impressed upon everyone. The remarkable strides made in the dyestuff industry in the United States and the development of substitutes for crude materials needed in many lines of manufacture carry great weight in the public mind, but there are less known developments that will rank with these when peace is restored and their application to uses in daily life stand out more prominently. The war led to the discovery of a preparation which heals shell-torn flesh or bullet wounds and leaves no scar. The manufacture of synthetic milk may yet prove of inestimable value to mankind. Research chemistry is coming into its own and the next generation will probably witness developments as wonderful as the telephone, the moving picture, the electric light and the aeroplane.

### New Quinine Contract

A cinchona contract between the Java cinchona-planters and the Dutch, Java, English and German quinine-manufacturers, which lapsed on July 15, last, after having been in operation for five years, has been replaced by a new contract, which is to cover the period from July 5, 1918, to December 31, 1923, and is between the cinchona-planters in Java and the Dutch quinine-makers, comprising the Amsterdam, Maarssen, and Bandoeng factories. The Cinchona Bureau is in future to consist of three representatives of the planters and a like number of delegates from the factories, with an independent President, who will direct its operations. The Bureau is to take a more active part in the work of the syndicate, and among other things will fix the price of quinine and maintain a representative in Java.

The basis of the new contract is to be the price of quinine. When this does not exceed 20 florins per kilo, the planters are to receive three-fifths and the quinine-makers the rest. Any advance on 20 florins is to be divided equally between the two parties. The price of bark is to be 6c per half kilo, for each unit per cent. of quinine sulphate. This is to be paid to the planters by the factory on delivery of the bark, and the rest will be paid by the Bureau, when the price of the quinine is settled.

In future the calendar year is to be the normal working period, and the makers are pledged to take bark equal to 515,000 kilos of quinine sulphate

each calendar year. The first period is to be July 15, 1918, to December 31, 1919, and in this time they have guaranteed to take bark equal to 751,000 kilos. These quantities appear to be minima, and the actual takings are to be settled each year in Holland or Java as may be arranged. Pharmaceutical bark is outside the scope of the agreement so long as it is sold by public auction in Amsterdam or direct in Java. Sold otherwise it is not to be disposed of below prices 50 to 85 per cent higher than those that would be obtained for it if it were considered as factory bark.

### POINTS IN PRICE-FIXING DECISION

The decision of Vice Chancellor Lane, of the New Jersey Court of Chancery, restraining Hahne & Company, a Newark Department Store, from selling trademarked watches manufactured by Robert H. Ingersoll & Bro. at less than standard advertised prices, is important in its possible bearing upon interpretations of the Sherman and Clayton anti-trust acts. These acts were invoked by counsel for the defendant in the final hearing recently had upon the application of the Ingersoll Company.

It was contended by counsel for the defendant that the restrictions imposed by the Ingersoll Company upon the sale of its trade-marked, guaranteed watches were in restraint of trade and in violation of the spirit of the Sherman and Clayton anti-trust acts as interpreted by the Supreme Court of the United States. This is over-ruled by the vice chancellor, who holds that the points at direct issue in this case have not yet been ruled upon by the Supreme Court.

The injunction carried by the decision does not prevent the sale below advertised prices of the watches in the case, provided the trade-mark name and the manufacturers' guaranty are first removed. It is the vice chancellor's opinion that "the practice of a manufacturer to make and sell an article not the subject of monopoly and subject to keen competition, the price of which has been standardized through extensive and expensive advertising, of affixing a notice under the terms of which purchasers are forbidden to resell at less than the standard price without removing the manufacturers' marks and guaranty, is not offensive to public policy or the Sherman or Clayton acts."

### Liberty Bonds Keep Both Running



# The Industrial Chemist

## *A Symposium on the Urgent Situation Brought About by the Demand for Technical Men by Manufacturers*

The need of chemists for war work and the decimation in the ranks of college instructors and industrial and research workers to meet the demand has aroused manufacturers and educators to the necessity for drafting large reserves to meet the call for chemists after the war to support this vital industry when competition threatens it. The importance of technical training was never so keenly felt as now. Manufacturers are expending large sums in new plants without knowing whence the technical force to run them is to come. The question of the proper training for industrial work, and the necessity for preparing courses that will fit men for the different branches of the profession—plant management, research and analytical work or chemical engineering—has interested the leading men in the industry, who have contributed to this symposium, discussing the subject from the point of view of the chemist, the instructor and the manufacturer. The series of articles will appear in DRUG AND CHEMICAL MARKETS each week during October, possibly extending into November.

### Training of Chemists

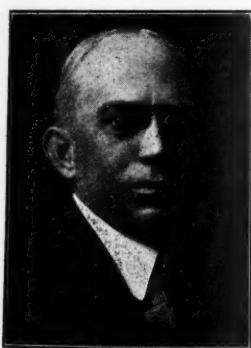
By Prof. B. F. Lovelace, Johns Hopkins University

THE era of surprise when, shortly after the outbreak of the war in 1914, the public came to a rude realization of the extent to which we were dependent upon other nations, and especially upon Germany, for the supply of so many essential chemical substances, quickly gave place to a determination

to supply the deficiencies ourselves. When we consider the many handicaps under which we have labored, not the least of which has been the scarcity of properly trained chemists, the progress which has been made is really remarkable. And American capital, backed by public opinion, appears to have definitely resolved that this development shall not stop after the war, but that the vast chemical industries begun in this emergency shall be continued and further expanded.

#### The Problems the Industry Faces

In the presence of this situation a number of vital questions arise. Have we a sufficiently large and properly trained body of chemists to justify the hope that we can carry through successfully this proposed development? Are our universities and technical schools giving their students the best kind of training to meet the situation? Do those in charge of plant operations in what are distinctly chemical processes themselves clearly understand the kind of training which their chemists should have in order to make them of greatest value to the industries? Have works managers in general a sufficient appreciation of the value of laboratory research? The low esteem in which the laboratory man is held in some quarters is no doubt partly due to the fact that frequently a process which works smoothly and apparently economically in the laboratory breaks down when tried



PROF. B. F. LOVELACE

out in the plant. Are such failures always inherent and necessary, or are they not, in some cases, due to the fact that we have not yet learned all that may be learned about bridging the gap between laboratory and plant? Finally, have we anything to learn from the methods employed by Germany in training and utilizing her chemists—methods which have admittedly given her superiority in a number of lines and contributed much to her efficiency both in war and peace?

It is clear that our ability to answer wisely these and similar questions will in large measure determine the future success of chemical industry in America. On this account the decisions of DRUG AND CHEMICAL MARKETS to bring about a discussion of the question of the industrial chemist is very timely and I wish to thank the editors for extending me an invitation to participate in the discussion.

In considering the chemist's technical equipment we must bear in mind that the period of training is limited and that, speaking in general terms, if we include one thing it must be by excluding something else. For the purpose of this discussion I shall assume that the period of training will cover seven years subsequent to the high school—four years in college during which the student receives his general education and lays a foundation for his future study of Chemistry and three years for specialization.

#### How Chemical Processes Are Developed

Let me attempt to give what I conceive to be the logical steps in the commercial development of a chemical process. The commercial solution of a definite chemical problem is sought and this problem is naturally put up first to the chemists. In the successful launching of such a process there are three fairly well defined stages.

The first is the laboratory stage. It involves first of all an exhaustive search of the literature on the subject, followed by a small scale laboratory investigation of the reaction or reactions being considered for the accomplishment of the end desired. This should be a strictly scientific investigation and differs from a so-called "pure" scientific research only in one particular, viz., that it has a definite commercial end in view. The same methods are employed and the same qualities on the part of the investigator are necessary.

If, as a result of such a laboratory study, a commercial operation can be tentatively worked out, the

next logical step is to try out the proposed process on a semi-commercial scale. The "experimental house" is simply a large scale research laboratory, the object of which is: 1. to find out any unforeseen mechanical or engineering difficulties which might prevent the commercial operation of a process already worked out in the laboratory and 2. to give a sound basis for estimating costs. In the design of apparatus for the larger experiments and in operation the chemist must co-operate with the engineer or chemical engineer. The scale of operations in the experimental house will depend on the nature of the process being studied, the object being simply to bridge the gap between the laboratory and the plant.

If the results in the experimental house are satisfactory, success is practically assured, and the process now goes into large scale production. Here again the engineer designs and constructs the plant and operates it, with the co-operation of the chemist. The help of the chemist will be necessary until the process is in smooth running order. It is to be noted that the connection of the chemist with the process becomes less and less as it advances toward commercial operation.

#### Two Kinds of Chemical Research

There are then two fairly well defined kinds of industrial research, viz., small scale laboratory research, followed, if a successful process seems probable, by large scale experimentation.

For laboratory research there should be men having the broadest and most thorough theoretical training possible. Knowledge of engineering and familiarity with plant operation are not essential to the laboratory man, though of course he must be sufficiently practical to make it possible for him to advise and co-operate with the engineer in the experimental house and plant. But there are several qualifications that are essential to the successful laboratory man. He must have a sufficient familiarity with the literature of chemistry to make it possible for him to find out promptly the present state of recorded knowledge on the particular subject at hand, a broad knowledge of the fundamentals of chemistry, especially physical chemistry, which alone will make it possible for him to interpret known facts with reference to the particular problem under study, originality in devising new experiments and new methods of attack and enthusiasm in carrying them through the completion.

German universities have for a number of decades given this kind of training to large numbers of chemists who have gone into the industries in a veritable stream. Indeed, chemical instruction in the Technische Hochschule differs from that in the universities far less than does the instruction in our technical schools. A number of American universities also give this training in what is called post-graduate work leading to the degree of Doctor of Philosophy in Chemistry, which requires a minimum of three years devoted wholly, or practically so, to chemistry. These post graduate courses presuppose a bachelor's degree, based in the usual four years of college work including three or more years of undergraduate chemistry.

The theory upon which the post-graduate work in chemistry at the Johns Hopkins University is based is that the student can not prosecute his study of chemistry effectively without having acquired familiarity with several other related subjects. These embrace:

1. Mathematics, including calculus and differential equations.
2. Physics, including electricity, thermodynamics and the kinetic theory of gases.
3. Certain foreign languages, especially French and German.

With such a foundation in mathematics, physics, and languages the student is able rapidly to assimilate the literature on a particular subject. Without it, his progress will be painfully slow. Indeed the theory of chemistry will be largely a closed book to him without such a knowledge of physics and mathematics.

The actual instruction during the three years is along broad general lines. A total of about 120 lectures are given in each of the subjects, organic, inorganic and physical chemistry and about 60 in quantitative chemistry. From one to one and a half years in the laboratory (6 to 7 hours a day) are devoted to work of a routine character: more difficult organic and inorganic preparations, electro-chemical and physico-chemical methods and quantitative analysis. Since research is to be his chief function in the plant, the culminating feature of his training consists of one and a half to two years of original investigation under guidance. The courses at the Johns Hopkins University are so arranged that during the period which the student devotes to research the only distraction he has is attendance upon about six lectures a week which come at the first hour in the morning so that his entire day thereafter is uninterrupted.

Inasmuch as the chemist, in addition to his laboratory research, will from time to time be called upon to co-operate with the engineer and chemical engineer in the experimental house and plant, it is desirable that he have some familiarity with engineering. Let us postpone our discussion of this phase of the chemist's training till we have considered the second kind of plant research.

In the second kind of research, viz., large scale experimentation, engineering problems arise and there must be the most cordial co-operation between the engineer and chemist. American practice has demanded for this kind of research a combination chemist and engineer and in response to this demand various colleges and universities have inaugurated courses in chemical engineering. The attempt is made to give the student in four or five undergraduate years a sufficient knowledge of chemistry and engineering to make him capable of developing and operating plant processes. That the idea is a sound one is indicated by the success which men of this training have achieved and by the constant demand for them to fill a place in the factory quite as distinct and perhaps as important as that of the chemist.

#### Chemist and Chemical Engineer

Inasmuch as the proper functions of the chemist and chemical engineer are quite distinct and require different kinds of training, it is the judgment of the writer that it will be a mistake to try to combine the two in one, as a general rule. For the highest efficiency the plant should have a sufficient number of research chemists to make it unnecessary for its chemical engineers to undertake laboratory research-work for which they have not had the requisite training. It should be clearly understood that I am here using the term chemical engineer in its more restricted sense as applying to the man whose training in chemistry is limited to the work prescribed in the chemical engineering courses of American technical schools. As the writer understands it, this type of training is not intended to develop research chemists but is admirably adapted to produce men equally needed in the plant, viz., those who can translate the results of laboratory research into plant processes.

The knowledge of chemistry possessed by the chemical engineer would seem to render it unnecessary for the plant chemist to have received any elaborate instruction in engineering. The main thing is that when he comes to assist the chemical engineer in the ex-

perimental house and plant he should be practical and able to think in terms of the engineer. It may be that some time devoted to engineering subjects before he begins his special study of chemistry would contribute to this end.

In the opinion of the writer one of the primary weaknesses of American chemical industry is that, with a few conspicuous exceptions, too little support is given the research department. It is a most distressing fact that in many plants the only "chemists" for whom there is any use are analysts. Whether it is due to prejudice on the part of the management against the "theoretical" as opposed to the "practical" man, or failure to understand the really great possibilities in the way of economies that could be accomplished in almost any plant by utilizing the services of well equipped research chemists, or the difficulty of obtaining such men, the fact remains that in many plants very little support is given to the research laboratory.

## The Plane of the Chemist

By Dr. D. Basil Alexander, Chief of Chemical Division, Barber Asphalt Paving Co.

I DO not hold with those who contend that a chemist should use his profession as a stepping-stone to a managerial position: as soon as he assumes the role of superintendent he atrophies the trend of thought for which his special training was a means. He takes another level, from being scientific he becomes commercial. I do not mean to imply that a man should not try to increase his sphere of usefulness, and incidentally his salary; but a research chemist is seldom a business man, and a man trained to follow out problems of making better products degrades his profession when he allows the question of cost to influence his experiments. That belongs to another department.

Every industry consists of three main essentials for success—Capital, Labor and Brains. All or any of these may be contained in an individual, but wherever found they should assist and supplement the others, as each is dependent upon the others for success, all working in their own department in perfect harmony and collaboration.

A black and white portrait of Dr. D. Basil Alexander, a man with dark hair and a mustache, wearing a suit and tie.

DR. D. BASIL ALEXANDER

The effect in the past of allowing commercialism to predominate owing to narrowness and lack of foresight on the part of the manufacturer (who is frankly out for the money) has been to consider the chemist as an expense, and not a producer; therefore his salary was cut to the lowest possible point, with the result that the younger members of the profession, just from college, or even high school, were considered sufficiently experienced. His duties were merely to guard the incoming materials from adulteration, and keep the outgoing products up to the required standard. This attitude kept the chemical end confined to narrow limits with no chance to expand. Furthermore the chemist was looked upon more in the light of an unnecessary evil that was antagonistic to the operations

of the plant. He was the fault-finder. This militated against harmonious unity.

### Chemists to the Rescue

Much as we deplore the grasping attitude of the Germans we must give them credit for recognizing early the value of a trained chemist in perfecting products. Take the single instance of the dye industry as an example. Although the aniline dyes were first discovered by an Englishman it was the German nation that recognized the future of the industry, and established a monopoly. That this supremacy was due to the indifference of the other nations who were willing to buy cheaply rather than produce, is shown by one result of the present war. Three years ago we were threatened with a dye famine because the German ports were closed by the British blockade, but I have not heard of any industry using dyes being shut down because of the lack of them. The chemist was recognized as the man to whom the manufacturer must look to continue the operation of the plant; and he rose to the occasion. His salary was increased, the better the man the higher the salary he drew. He became a factor, not necessarily to cheapen processes, but to supply necessities. A similar situation occurred in the drug and chemical markets.

Now the larger and more progressive companies maintain research chemists who receive good salaries, and earn them through the increased perfection of the finished products, the creation of new combinations, and the profitable utilization of waste materials.

Having reached this point it devolves upon the American nation to hold fast to the present condition. The Chief Chemist should be a high salaried man of long experience and devoted to research. Under him will be the various grades of men according to their ability, down to the high school graduates who do the routine work, and train themselves (if it is in them) for research work in the future. From being poked off in the corner of an obscure building, the laboratory should be the front door of the plant. Give a man the reputation of being a valued employee, and he will become more so. The chemist that aims for a management, and gets it, will very likely be a better manager than he was a chemist—he has found his niche. I do not wish to be understood as implying that the chemist should not familiarize himself thoroughly with all the details of the industry with which he is connected. Because of his habit of observation he is well qualified to note weak places in operations that escape the casual eye of others not accustomed to look beyond the economical operations. Therefore the chemist finds himself eventually in a position at once the friend, adviser, and coadjutor of the various departments of the whole organization.

## Young Chemist's Opportunity

By Dr. D. W. Jayne, Manager Chemical Department, The Barrett Co.

CHEMISTS for industrial work, fall into three classes—Research chemists, plant chemists and analytical chemists, all of which are essential to the growth and maintenance of our chemical industries. The ideal chemists in one class differ from the ideal in the others, in training and personality. For research chemists, men who have taken post-graduate work, preferably a Ph. D. are usually best equipped. Their work in the pure science is more complete, and furthermore, most men who take post-graduate work naturally lean towards laboratory work, and they thereby show their inclination for continuous investigation work in the laboratory.

The employer should expect such men to show tenacity, resourcefulness and patience, which are essential to results in research work. If results of commercial value are obtained (and both employer and chemist must expect frequent disappointments) then the chemist must realize that the results belong to his employer and are not his personal property, although it should be the policy of the employer, to give proper recognition and encouragement to such men.

#### Training of Plant Chemists

For plant chemist, a man who has been able to take some engineering courses as part of his training, is more desirable than one who has not, but the pure chemistry of his education must not have been neglected in order to secure this engineering training. It should be acquired through extra years of study. No chemist should sacrifice his training in the principal courses in chemistry to specialize. A manufacturer should, and does, expect that chemists will require some time to learn his particular branch of the industry, and the man with the best groundwork of fundamentals, not only learns the special applications more quickly, but his value must continue to increase with time; whereas, a man with a poor groundwork, but who may have attempted to specialize, usually comes to the point where his value ceases to increase in proportion to the time of employment.

The personality of the plant chemist, is of vital importance, the principal requirement being the ability to work with and among all of the classes of men employed in the plant. The man who is antagonistic by nature, never makes a good plant chemist, for his ability to know exactly what is going on in the plant, is absolutely necessary, and unless he secures and retains the good will and confidence of the men with whom he comes in contact, he will not reach the intimate contact with the plant operation that he must have, and furthermore, he will tend to disorganize the operating force.

Another important quality in the works chemist, is the ability to differentiate between facts and fancies; between the practical and the impractical.

#### For Analytical Work

Analytical chemists in the classification intended here, are those men who have had sufficient training to enable them to do routine works' tests under the guidance of the head of the laboratory. This requires no comprehensive training, as their value is in the expert handling of tests, which can only be acquired by many repetitions. Accuracy and a certain nimbleness of the hand and eye are the essential requisites. The employer does not expect initiative in such men, and if they show it, their advancement usually lies in transfer to the operating force in the plant.

The principal difference between chemists and most other employees, is the time required to adapt the principles of their studies to the particular phase covered by the industry that employs them and the recognition which is given to that feature. The employer requires recognition of this feature from the chemist, and the chemist should be careful not to overlook it, but to appreciate it and let it increase his loyalty to his employer.

The points so far offered have been in relation to chemists just leaving their college or training course, to enter industrial work. The measure of the chemist subsequent to that, as of any other man, is made by what he has done, and his record should show whether he has approached the ideal chemist and what the employer can expect of him.

#### EXPOSITION SPEAKERS TELL OF POTASH PRODUCTION IN THE UNITED STATES

##### Method of Recovery From Kelp Described By C. A. Higgins of Hercules Powder Co.—Blast Furnace Output Discussed By Linn Bradley—Other Papers Read

Chemical apparatus and equipment supplies were a prominent feature of the Exposition, from glassware for the laboratory to the autoclaves and kettles used in producing dyestuffs and chemicals. Many manufacturers of machinery transported massive pumps, condensers and dryers from their works to the Grand Central Palace at great expense to demonstrate some improvement which means economy or time-saving in production. These exhibits vied with those showing the products derived from coal, and the display of drugs and pharmaceuticals which are dependent upon ethyl alcohol as a solvent.

The production of potash in the United States was discussed in papers read on Wednesday.

C. A. Higgins, of the Hercules Powder Company, told of the recovery of potash from kelp, and the utilization of kelp ashes for fertilizer, but gave it as his opinion that kelp, solely as a source of potash, would never compete with unrestricted supplies from Europe, or even with that recovered in modern cement or blast furnace practice. Potash from desert lakes and alunite was discussed by John W. Hornsey. Alfred de Ropp, Jr., of the American Trona Corporation, told of the potash plant at Seales Lake.

Linn Bradley, Chief Engineer of the Research Corporation of this city, whose subject was "Recovery of Potash from Iron Blast Furnaces and Cement Kilns by Electrical Precipitation." He said: "We now have sufficient furnace capacity to produce annually over 1,500,000 tons of potash per annum—far in excess of our pre-war requirements. The difficulty lies in the fact that we have not found that all furnace burdens carry the amount of potash shown in the table. If the furnace charges and operations could be adapted so that one-fifth of the amount, or 300,000 tons, could be produced, this would meet our needs without assistance from any other source."

Mr. Bradley said that Sericites and Cambrian potash-bearing slates had been located in Georgia which carry potash in considerable quantity, several deposits analyzing as high as 8 or 9 per cent.

Thursday was devoted to electrochemical industries and ceramics; Friday to the metal industries, and Saturday to industrial organic chemistry. In the evening motion pictures illustrated the method by which zinc oxide is manufactured by the New Jersey Zinc Co.

Charles F. Roth, who is associated with F. W. Payne in the management of the Exposition, is now in the Chemical Warfare Service and stationed at Washington. He was furloughed for the period of the Exposition, and surprised his friends by appearing as usual on active duty in the office of the managers. The exhibitors have again, this year, expressed their appreciation of the executive management which carried through the programme with the same precision as in previous years.

At a meeting of the organizations backing the Chemical Exposition, it was decided to hold next year's exposition in Chicago. The show will probably be staged in the Coliseum in that city in the week of Sept. 22. Western interests have been desirous for some time of having the show held at a midcontinent point on account of its educational value. The Exposition will probably be held again in New York in the Fall of 1920.

# Planning to Break Germany's Dye Monopoly

## *Campaign of Du Pont Company Outlined in Pamphlet Entitled "From Explosives to Dyes"*

Pierre du Pont, head of E. I. du Pont de Nemours & Co., said at a recent conference of company officials and employees that if the United States army and navy would lick the Kaiser on land and sea the du Pont interests would see that the Germans were defeated in the commercial world if they again attempted to monopolize the dyestuff trade in the United States. The plans for making good this promise are announced in a pamphlet issued last week by E. L. du Pont de Nemours & Co., and distributed at the Chemical Exposition. It is said that twenty leading authorities in the company's employ, including chemists and heads of departments, have been at work upon the "book of plans" for several months. It is entitled "From Explosives to Dyes" and the extracts here given tell the story.

IT is but a short step from explosives to dyes in days such as these, when explosives are complicated chemical combinations whose ingredients are, in large part, the bases of the coal tar dyes. These coal tar dyes have supplanted natural coloring compounds as the newer explosives have supplanted the original gunpowder of the Chinese.

The Du Pont Company, founded in 1802 by a French émigré of distinguished ancestry and careful scientific training, established the business of manufacturing explosives in the United States. The continued control of the Company by a long line of men of unusual ability in the same family has been due not only to their natural ability, but also to a technical training in the lines of their business, so that some of the most valuable discoveries and processes of the industry are due to men who would ordinarily be thought of simply as owners.

When the war started in 1914, although the Du Pont's plants could produce many millions of pounds of dynamite and black powder per month, their capacity was only about 12,000,000 pounds per year of smokeless powder. The demands have come to be over 440,000,000 pounds a year. And these demands have been met.

The Company built new plants and sold the product at \$1.00 per pound, although from the moment the great war demand was created every kind of material began to increase in price rapidly—steel, coal, cotton, alcohol, lumber and nitrates. You may go over the entire list of our markets and you will find everything on the list from one to two hundred per cent higher than in pre-war times; and these high prices still remain in force. Powder, started at \$1.00 per pound, has been reduced persistently whenever a saving in cost would be effected. As an example, the following table shows the dates of reductions in prices:

Oct., 1914, the price was	\$1.00 per lb.
May, 1915, the price was	.97½ per lb.
Oct., 1915, the price was	.90 per lb.
Nov., 1915, the price was	.80 per lb.
July, 1916, the price was	.60 per lb.
Sept., 1916, the price was	.47½ per lb.
Dec. 1916, the price was	.60 per lb.
April, 1917, the price was	.47½ per lb.
Sept., 1917, the price was	.49½ per lb.
Sept., 1918, the price was	.43½ per lb.

This astonishing record was made possible by many economies in production and by many inventions, as well as by the efficient organization of the Company. Up to March, 1918, all of the plants built by the Du Pont Company had been built solely to supply the Allies.

### Huge Nashville Plant

In March, 1918, the Company began the erection of a large smokeless plant at Nashville, Tenn., for our own Government. It will take 20,000 to 25,000 men 10 to 12 months to complete it, and the Company has agreed to give its 116 years of accumulated knowledge, and to do this enormous construction at actual cost and without profit.

This plant is being built in 9 units—each one complete in itself. One of these units is approximately eight times the size of the largest smokeless powder plant in the United States prior to 1914. The entire plant is seventy times as large as the largest plant before the war. It covers an area 1½ miles wide by 3 miles long. To operate it at full capacity will require 1,500,000 pounds of nitrate of soda per day—675,000 pounds of sulphur per day. It will consume 4,500 tons of coal for each 24 hours, which is equivalent to 100 carloads, or 2 trainloads. It will require 100,000,000 gallons of water per 24 hours, or as much water as is used by a city having a population of 1,000,000 people. The central power plant will contain 68 boilers, each with a rating of 825 horse-power. It will be the largest smokeless powder plant in the world and the last word in powder making.

### Changing to Dyes

When this war, with its unprecedented demand for High Explosives, was forced upon America it was found necessary to create the factories required for a large output of high explosives, in most cases, from the first brick to the last piece of equipment. After the war, America, in the person of the explosives manufacturing concern of the Du Pont Company, will, insofar as possible, apply all this experience, organization, equipment and raw materials in the manufacture of intermediates, dyes and closely related products of a similar nature. This implies, however, years of work in the engineering, chemical, research and operative departments.

Why is the Du Pont Company in dyestuffs? The answer is obvious. As has been shown, the dye industry is very closely related to the manufacture of explosives. It was very easy for the organization to pass to this other work. But other Americans also accepted the challenge of the German boycott and set about making dyes for our country's use. The tremendous importance and significance of the Du Pont enterprise depends upon two things: (1) ability to meet the Germans in the matter of quality, and (2) establishing the industry so firmly that no after-the-war activities of Germans shall have power to disrupt our newly-established enterprise, which will set us free forever from dependence upon German dyes.

### The Indigo Plant

The indigo plant is the heart of the dyestuff works. Indigo is the great staple dye of the world. The

achievement of the Du Pont Company in the erection of a plant having a rated capacity sufficient to supply the entire needs of the United States, within the seemingly incredible time of 10 months, stands as an accomplishment second to none in the development of the coal tar color industry in the United States during the war.

The successful manufacture of synthetic indigo marks the beginning of the production of a series of fast colors, which are so essential to the various consuming industries. It is highly essential that manufacturers of the particular fabrics in which such colors were used should get back to their former standards as soon as possible.

Our great neighbor and ally, Great Britain, considers the manufacture of synthetic dyes to be a "pivotal industry." Shortly after the outbreak of the war her Government took steps to secure the establishment on a permanent basis of the manufacture of dyes in England. A Dye Commissioner has been appointed, who gives practically all his time to this industry, and every care has been taken to keep this essential industry from any possibility of control from any foreign source after the war.

It is England's "great moment" in dyestuffs; it is ours, too.

Our productiveness per man is far greater than Germany's. There is no reason to fear her accumulated fund of experience in this line of manufacture, provided we, at this time, prepare to meet her at all points. The program of the Du Pont Company is a defensive program with a view to securing and assuring the absolute independence of the great American textile and other consuming industries, which had been so long subject to the autocratic will of Germany for their supply of dyestuffs.

#### FEATURES OF N. W. D. A. MEETING

The annual meeting of the National Wholesale Druggists' Association will be in session at the Hotel Astor in New York City the week of October 7. In issuing his call for the convention, President C. E. Bedwell, of Omaha, called attention to the fact that never has the organization faced so many problems seriously affecting the wholesale drug business and never have thought, counsel and advice been needed more. Therefore it is to be hoped that the meeting will be largely attended.

Laws present and prospective are to be discussed at the sessions by members who handle the legislative business of the Association. Recognizing the necessity for curtailing needless expenditure, the social features of the convention have been somewhat limited, but ample provisions for recreation and entertainment still form part of the programme. The tentative outline of plans for the meeting includes business sessions taking up most of the mornings and the early afternoon hours during the week, a president's reception on Monday evening, a banquet Thursday evening at which addresses by officers and two invited speakers of national distinction will be given, and an all-day trip to Bear Mountain on Friday, October 11.

#### DYE MAKERS IN CONFERENCE

One of the most important meetings of the year of the American Dyestuffs Manufacturers' Association was held recently in New York and a number of resolutions of importance to the dyestuffs industry were adopted. The meeting was attended by members of the Dyes Institute and of the Dyestuffs Committee of the Chemical Alliance. Morris R. Poucher, of the Du Pont Company and president of the American Dyestuff Manufacturers' Association, presided.

#### NATIONAL RESEARCH LABORATORY NEEDED

A National Research Laboratory was advocated by Dr. Charles H. Herty at a conference at the Chemical Exposition on Friday last. Dr. Herty said:

"It is a peculiar situation that exists in this country today. The three great commercial applications of the so-called 'coal tar chemicals' are, first, explosives, for which means are never lacking for the testing of new products; second, dyestuffs, for which fortunately the equipment for testing as to standard, fastness, durability, and aesthetic suitability is simple, inexpensive, and accessible to every worker; third, medicinals, and here the problems of investigation become even greater.

"The war period has developed many brilliant organic chemists, whose talent could be applied to the relief of suffering. How can this application be made? A suggestion has been advanced which seems to cover the situation admirably, namely, that an institution somewhat analogous to the Mellon Institute be founded, in which adequate provision for laboratory tests of all kinds would be made, and to which, through the establishment of fellowships, manufacturing organizations could send young men for working out specific problems. Cooperation should be established between this institution and the organic laboratories of our universities, as well as with the hospitals of the country."

The therapeutic value of a product produced by a chemist today must be determined by a pharmacologist or physiologist and the resources for testing its qualities are limited.

#### NEW PLATINUM REGULATIONS

The War Industries Board has just made public the regulations limiting the sale, possession and use of platinum, iridium and palladium. These rules were prepared by a committee consisting of Hennen Jennings, bureau of mines, chairman; C. L. Parsons, bureau of mines; C. H. Conner, War Industries Board; J. M. Hill, geological survey; and W. F. Hillebrand, bureau of standards, and are designed to limit the use of the three metals as much as possible in all industries not engaged in war work.

The use of any of the metals in jewelry is prohibited, as is the manufacture for use in dentistry of any metal, metal parts or alloys containing more than 20 per cent by weight of platinum or 40 per cent of platinum, iridium or palladium combined.

Licenses will be required to purchase, sell, barter or deal in the unmanufactured metals, or to possess, use, sell, purchase or barter in them for business purposes if engaged in the production of sulphuric or nitric acid or other chemical products in which the metals are used, or the production of chemical apparatus and reagents of all kinds containing them.

Every applicant for a license will be required to submit with his application a sworn inventory of all platinum, iridium or palladium or compounds thereof in his possession or control; and every licensee will be required to submit at such times as may be designated by the War Industries Board a sworn inventory of his holdings. Records must be kept by licensees of their sales, purchases and other transfers of the metals or articles containing them, with the names and addresses of the purchasers, sellers or transferees and the quantities involved.

William Whitely Baker, vice-president of the American Agricultural Chemical Company, died recently at Saranac Lake, N. Y. The fertilizer trade of Baltimore, Md., adopted resolutions of condolence with the family.

## News of Companies

The Harral Soap Company, 136 Havemeyer Street, Brooklyn, N. Y., has filed notice of a decrease in its capital from \$200,000 to \$50,000.

Fire recently destroyed a portion of the Ames Chemical Laboratory, Glens Falls, N. Y., engaged in the manufacture of nitrate of silver, with loss estimated at \$10,000.

Joseph A. Schifflers, connected with the Phoenix Dye Works, Knoxville, Tenn., is considering plans for the establishment of a new plant for the manufacture of dyeing-composition.

The War Department, Washington, D. C., is making rapid progress in the construction of the new plant at Fairmont, W. Va., for the production of phosphorus. Captain Walter W. Huff, Quartermaster's Department, is in charge of construction.

The General Chemical Company, New York, is said to be considering plans for the construction of a large new three-story brick and concrete plant, about 200x 600 feet, at Race and Winder Streets, Baltimore, Md. The works are estimated to cost \$200,000.

The Penn Chemical & Manufacturing Company, Manor Station, near Pittsburgh, Pa., has disposed of its plant and property comprising manufacturing building on a site of approximately two and one-half acres to the Nassau Steel Company, for a consideration said to be about \$15,000.

The Philadelphia Quartz Company, 212 South Third Street, Philadelphia, Pa., manufacturer of chemicals, is said to have acquired a site comprising approximately thirty acres at Rahway, N. J., fronting on the Pennsylvania Railroad for the establishment of a large new plant for the manufacture of its products. It is understood that the project will involve an expenditure in excess of \$1,000,000.

Announcement has been made by the Aetna Powder Company that plans are now being prepared for the immediate reconstruction of the portion of its works at North Birmingham, Ala., recently destroyed by fire, caused by the explosion of 4000 pounds of nitroglycerin. It is expected to have this work completed within three months. J. L. Almon is superintendent of the local plant.

## CHARGES AGAINST CHEMICAL COMPANY

Application has been made to the Circuit Court at St. Louis for a receiver for the Allan-Pfeiffer Chemical Company. The application has been made by a stockholder and former employee of the company, who alleges mismanagement and large loss to the company.

According to the applicant's statement, no board meetings have been held since 1914 and no stockholders' meetings for several years and the officials have failed to make statements to stockholders as requested. The company cannot pay its debt and cannot get the money to procure raw materials for orders amounting to many thousand dollars, it is asserted.

C. J. Lane, the president of the company, denies all these charges, and says the suit is spite work. The allegation that the company is in a bad financial way he pronounced absolutely untrue. The company, he says, is in good condition, and is making money.

## HEARING ON FERTILIZER RATES

Proposed Change in Classification of Cottonseed Meal Cake Opposed By Trade Associations—Argument By R. A. P. Walker of New York

(Special to DRUG AND CHEMICAL MARKETS)

NEW ORLEANS, La., Oct. 1—When the Interstate Commerce Commission convened here on Sept. 17, to hear protests against the proposed consolidation of classification No. 1 for the Southern territory, removing cottonseed meal cake and hulls from the fertilizer class and putting them in Class D, the grain schedule, and also to change the freight rate on nitrate of soda and other fertilizer materials in less than carload lots, R. A. P. Walker, traffic manager of the American Cotton Oil Co., New York, appeared for the Southern Fertilizer Association and the Interstate Cottonseed Crushers Association, and filed statements by the U. S. Department of Agriculture and by the heads of various state departments testifying to the fact that cottonseed meal is recognized as a fertilizer.

Mr. Walker said the rates proposed would be 34.7 per cent higher than the rates on other fertilizer material with which it is in competition. Per car mile earnings under the proposed rates from Atlanta to New York, 818.9 miles, on cottonseed meal at present rates are 17.83 cents; on automobiles, 19.23; household goods, 17.43; furniture, 10.3; while the proposed rates would make the per car mile earnings on cottonseed meal 26.9 cents; cottonseed meal carrying a minimum of 40,000 pounds, automobiles, 10,000, and household goods and furniture, 12,000. Comparing the rates on cottonseed meal and cake from Atlanta to Boston, New York, Philadelphia, Baltimore and Newport News with the grain rates from Chicago and East St. Louis to the same points, Mr. Walker found that the rates on the cottonseed products were invariably higher than on grain and this would be very much accentuated under the proposed Class D rates. Mr. Walker said that if cottonseed meal was a feed, it was, under the fertilizer basis, being discriminated against as compared to the present grain rates in C. F. A. territory.

Mr. Walker said that if the proposed Class D rates were permitted in the southeast, the cottonseed meal people would certainly ask for the same privileges afforded the grain people, such as milling and mixing in transit.

H. L. Bates, superintendent of manufacture, International Agricultural Corporation, said that of all the meal bought last year practically every pound went into the manufacture of fertilizer and that because of a shortage of tankage, of fish, of cyanamid, and of nitrate of soda, there would be a million and a half tons of the meal used this next year solely in the manufacture of commercial fertilizers.

H. W. B. Glover, traffic manager, Virginia-Carolina Chemical Company and the Southern Cotton Oil Company, protested against the new classification, scattering the various fertilizers throughout the book. He filed an exhibit of what the present classifications show, what the proposed one shows, and what he thought the new classification should be.

F. W. Beyer, manager, Nitrate Agencies Company, New Orleans, objected to the proposed advance in less than carload rates on nitrate of soda. He said the Government had recognized it as a fertilizer material and he saw no reason why the Railroad Administration and the Interstate Commerce Commission should rule differently. It analyzes 18 1/4 per cent of ammonia and is therefore the cheapest source of that chemical for use in making fertilizers, three-fourths of the nitrate of soda being used for fertilizer manufacture.

# The Drug & Chemical Markets

## MENTHOL AND CAMPHOR HIGHER

**Advance Due to Advices From Japan That Estimate Of Reserve Stocks Were Excessive — Saccharin Again Declines—Seed Market Unsettled**

### PRICE CHANGES IN NEW YORK Stocks in First Hands

#### Advanced

Arnica Flowers, 2c	Mustard Seed, California Brown, 1c
Blackhawk Bark of Root, 8c	Peppermint Oil, 50c
Blood Root, 10c	Pitch, Burgundy, Domestic, 2c
Camphor Refined, Domestic, 10c	Sunflower Seed, Domestic, South American, $\frac{3}{4}$ c@1c
Camphor Refined, Japanese, 47c	Wormseed Oil, $\frac{3}{2}$ c
Ergot, 5c	Canary Seed, South American, 5 $\frac{1}{2}$ c
Geranium Oil, Algerian, 50c	
Menthol, Japanese, \$1.30	

#### Declined

Caraway Seed, African, 3c	Mace, Banda, 1c
Cannabis Indica Herb, Domestic, Nutmegs, Singapore, 110s, 1c U.S.P., 30c	Pepper, Singapore White, 1c
Cassias, Saigon, Assortment, 1c	Saccharin, Soluble, Insoluble, 50c
Dill Seed, 2c	Sage, Greek Stemless, 3c

Trading in drugs is more or less hampered by the canvass for the Liberty Loan. Menthol and camphor advanced sharply on advices from Japan that estimates of supplies were too high. Saccharin declined again.

Crude drugs are steady. Botanicals show minor price changes with slight weakness. In seeds, herbs, leaves, etc., price revisions have been numerous. Canary seed, sage, and caraway seed are lower. The market is unsettled owing to restricted imports and tonnage scarcity.

Cadmium metal and compounds have been added to the export conservation list.

**Alcohol, Grain**—Manufacturers are taxed to their capacity to meet the needs of the Government and regular customers. Prices are steady for 188 proof at \$4.91 and for 190 proof at \$4.97 a gallon.

**Arnica Flowers**—Keener selling competition and more liberal offerings caused a weaker market. Sellers lowered prices 2c to 89c@94c a pound.

**Blackhawk Bark of Root**—Smaller supplies resulted in another rise, and sellers advanced prices 8c to 49c@55c a pound. All offerings at 49c to 53c a pound have been practically cleaned up.

**Balsam Fir, Canadian**—With supplies practically cleaned up in the primary market, local prices on the spot closed very firm at \$5.90@\$6 a pound. Other kinds of balsams closed unchanged and quiet, but steady.

**Blood Root**—Increased scarcity resulted in further price advances. Holders raised quotations 10c to 49c @55c a pound. Offerings were readily absorbed at the inside price.

**Camphor, Refined**—Domestic refiners raised prices 10c to \$1.34 $\frac{1}{2}$  a pound for supplies in bulk, in barrels, based on a shortage of supplies and rising primary markets. Prior to the outbreak of the war the price was 44 $\frac{1}{2}$ c a pound for supplies in bulk in barrels. Refiners are considerably behind in their deliveries on outstanding orders.

**Canary Seed**—The flurry in the market has quieted down and prices receded 5 $\frac{1}{2}$ c to 19 $\frac{1}{2}$ c@20c a pound for South American seed.

**Caraway Seed**—Prices closed lower, in response to expected arrivals. Holders lowered prices 3c to 62c@63c a pound for African.

**Camphor, Japanese**—Holders raised prices 47c to \$1.72@\$1.75 for refined 2 $\frac{1}{2}$ -pound slabs, owing to a marked scarcity of stocks. Cables from Japan noted a higher market, quoting November-December shipments, cost, freight, insurance, at \$1.35 a pound. At the close prices here were still advancing.

**Cannabis Indica, Herb, Domestic U. S. P.**—Prices are weaker owing to lower quotations for imported supplies. In some quarters holders lowered quotations 30c to 34c@55c a pound.

**Cassias, Saigon**—Assortments are offered at 1c lower to 52c@53c and 45c@50c a pound. This is attributed to dullness due to a dragging demand. Other grades closed quiet at former prices.

**Castor Oil**—Prices are steady and makers are quoting 30c@31c in barrels, 31c in cases and No. 3 in barrels 29 $\frac{1}{2}$ c@30c a pound. Efforts are being made by the Government to increase the supply of castor oil for lubricating airplane motors, and an investigation is on foot to determine the qualities of certain lubricating oils, to learn whether it is possible to use available supplies.

**Dill Seed**—Holders lowered prices 2c to 19c@19 $\frac{1}{2}$ c a pound. Larger offerings and an absence of demand were responsible for the decline.

**Ergot**—Russian and Spanish supplies are scarcer which led to a further advance of 5c to \$1.75@\$1.80 a pound.

**Geranium Oil, Algerian**—Prices scored a further sharp rise of 50c a pound because of higher primary markets. Handlers are now naming \$11@\$12 a pound, as to brand.

**Glycerin, C. P.**—Prices closed steady without change. The movement of glycerin has been chiefly to the Government. Refiners are naming 61c@62c a pound for chemically pure.

**Haarlem Oil**—The difficulty in obtaining supplies created a stronger market. Holders are quoting \$8.45@\$9 a gross for supplies in bottles.

**Mace, Batavia**—Holders lowered prices 1c to 45c@46c a pound for No. 2. Smaller inquiries and increased offerings are responsible for the decline.

**Magnesium Carbonate, Powdered**—The demand is gradually increasing and the market is stronger. Holders of U. S. P. supplies in barrels are quoting 20c@21c a pound.

**Menthol, Japanese**—There appears to be no limit to the upward movement, due to diminishing stocks, higher import costs and a large demand. Sellers raised prices \$1.30 to \$5.75@\$6 a pound. Cables from Japan quote prices equal to \$5.80 a pound laid down here.

**Mercury**—Offerings are slightly larger for prompt delivery at \$125 a flask of 75 pounds. Smaller quantities are obtainable at \$130 per flask of 75 pounds.

**Morphine**—Prices ruled steady and closed unchanged at \$11.80 an ounce for sulphate in 25-ounce lots. Widespread interest has been centered on the awards by the Government involving contracts for 18,000 bottles of eight mgm. hypodermic sulphate tablets, 250 to the bottle, ranging at prices from 88c to 90c a bottle.

**Mustard Seed**—California brown seed is firmer, based on a better demand and smaller stocks. Holders raised prices 1c to 24c@25c a pound.

**Nutmegs, Singapore**—Prices for 110 to the pound closed lower under a light demand. Sellers are asking 1c lower to 36c@37c a pound.

**Opium**—With inquiries steady and sufficient supplies to meet requirements, the market remains unchanged. Makers are quoting supplies in cases at \$21.50; powdered \$28.50 and granulated \$24.50 a pound. A scarcity of opium in London may lead to a firmer market here as reflected already in quotations on future deliveries.

**Paris Green**—Prices closed steady at 41c@42c a pound asked by makers, but business is slow. Second hands continue to quote supplies in kegs at 38c@39c a pound.

**Pepper, Singapore, White**—Holders lowered prices 1c to 31½c@32c a pound. This is attributed to an irregular market. Little authentic advice is received from the Orient.

**Peppermint Oil**—Certain brands are out of the market and handlers raised prices 50c to \$6.25 a pound. Other brands were quoted at \$6@\$6.50 a pound.

**Pitch Burgundy, Domestic**—Absence of imported supplies which are quoted entirely nominal and diminishing stocks led to higher prices. Holders are now asking 2c advance to 6½c@8c a pound.

**Quinine**—Lack of inquiries resulted in a featureless market. Government contracts were booked for 15,000 ounces of sulphate crystals of which 10,000 ounces were awarded at 97c and 5,000 ounces at 98c an ounce. Also 6,400,000 tablets of 200 mgm. to the tablet packed 1,000 to a bottle, were awarded at \$6.69 a bottle. Second hands are offering American sulphate at \$1 and Java at 91c an ounce while domestic makers continue to quote on the basis of 90c an ounce for lots of 100 ounces.

**Saccharin**—Buyers were unwilling to operate in face of freer offerings and increased price concessions. Sellers lowered prices 50c to \$23@\$23.50 for soluble and to \$24@\$24.50 a pound for insoluble, U. S. P. Some makers according to reports are offering to accept contracts for insoluble for October-November delivery below quoted inside prices.

**Sage, Greek, Stemless**—More liberal offerings weakened the market. Sellers lowered quotations 3c to 24c @24½c a pound.

**Sunflower Seed**—Smallness of stocks and better inquiries led to higher prices. Holders raised quotations ¾c to 8½c@8½c for good domestic and 1c to 8@8½c a pound for clean South American seed.

**Thymol Crystals U. S. P.**—Inquiries are increasing and prices closed steadier but unchanged. Holders are naming \$13.00@\$13.25 a pound.

**Venice Turpentine**—Supplies are very scant and prices closed stronger with an upward trend. Sellers are offering small quantities at former figures ranging from \$4.90@\$5 a pound.

**Wormseed Oil**—Larger offerings from primary markets weakened prices. Sellers lowered quotations \$2 to \$10@\$12 a pound, according to brand.

Charles H. Bayer, president of the Bayer-Strond Corporation of New York and of the Basic Products Company, and vice-president of the Sawtay Products Corporation, was killed recently in an automobile accident. His wife, who was with him, was killed at the same time. Mr. Bayer was 42 years old.

## MARKET FOR CHEMICALS IN JAPAN

The condition of the market for chemicals in Japan can be best understood by an examination of the following table of figures showing the imports and exports of drugs and chemicals into and, from Japan in the year 1917:

Articles.	Imports.	Exports
Hops .....	\$248,790	.....
Liquorice .....	130,448	.....
Saffron .....	37,121	.....
Galls, oak bark .....	254,036	.....
Tanning extracts .....	577,484	\$263,552
Indigo Rubber .....	4,565,112	.....
Gum arabic .....	43,322	.....
Shellac .....	547,068	.....
Rosin .....	993,629	.....
Other gums .....	99,240	.....
Gelatin .....	28,352	.....
Phosphorus:		
Yellow .....	28,466	258,582
Red .....	123,293	
Boric acid .....	110,222	.....
Oxalic acid .....	25,234	.....
Tartaric acid .....	209,893	.....
Salicylic acid .....	98,035	.....
Carbolic acid .....	2,374,432	.....
Citric acid .....	62,336	.....
Caustic soda .....	3,204,347	66,639
Soda ash .....	3,482,060	.....
Bicarbonate of soda .....	153,601	.....
Peroxide of soda .....	30,755	.....
Nitrate of soda, crude .....	4,862,313	182,752
Borate of soda .....	278,181	.....
Cyanide of soda .....	161,976	.....
Cyanide of potash .....	185,337	.....
Nitrate of potash .....	26,126	1,192,026
Chlorate of potash .....	77,471	
Bichromate of potash .....	249,862	
Bromide of potash .....	7,697	
Alum .....	12,767	106,752
Subnitrate of bismuth .....	32,900	
Chloride of ammonium .....	93,361	
Sulphate of ammonium .....	1,431,304	765,500
Carbonate of ammonium .....	140,900	
Acetate of calcium .....	\$31,124	
Formalin .....	89,820	
Glycerin .....	278,569	
Milk sugar .....	15,918	
Antifebrin .....	60,640	
Antipyrin .....	45,283	
Santonin .....	51,660	
Quinine, hydrochlorate and sulphate of .....	285,759	
Morphine, hydrochlorate and sulphate of .....	2,538,920	
Cocaine, hydrochlorate and sulphate of .....	477,659	
Alcoholic medicinal preparations .....	82,269	
Aromatic chemicals .....	26,560	
Tooth powders .....	47,168	\$213,712
Ginseng .....	304,206	
Insectifuge .....	729,115	
Compressed oxygen .....	28,292	
Sulphur .....	3,071,396	
Iodine .....	165,739	
Zinc dust .....	275,391	
Acetic acid .....	1,756,509	
Sulphuric acid .....	251,797	
Copper sulphate .....	392,862	
Iodide of potash .....	519,844	
Bleaching powder .....	742,854	
Calcium carbide .....	426,926	
Naphthalene .....	196,805	
Camphor .....	2,152,078	
Menthol crystals .....	797,163	
Menthol cane .....	84,796	
Toilet powders .....	142,182	
Gauze and bandages .....	505,305	
All other .....	3,301,671	

Of these imports about 60 per cent are imported into Kobe and Osaka. The chief chemicals imported from the United States are, in the order of importance, caustic soda, soda ash, carbolic acid, rosin, bichromate of potash, cocaine, salicylic acid, formalin, hops, glycerin, antifebrin, and tanning extracts.

The Phillips Sheet & Tin Plate Company, Weirton, W. Va., is planning for the construction of a by-product plant for the production of benzol in connection with the erection of a new blast furnace and gas works. The company has recently increased its capital from \$5,500,000 to \$30,000,000, to provide, in part, for this work. The production at the benzol plant will be used by the Government.

## Heavy Chemical Markets

### HEAVY CHEMICAL MARKET FIRM

**Benzoinic Acid Is in Pressing Demand—Soda Ash and Caustic Soda Have Advanced—Bleaching Powder Is Scarce and Sales Are Made at New High Prices**

#### PRICE CHANGES IN NEW YORK

(Stocks in First Hands)

##### Advanced

Benzoinic Acid, 15c lb.	Soda Ash, 5c to 15c 100 lbs.
Benzoinate of Soda, 5c lb.	Caustic Soda, 5c 100 lbs.
Permanganate of Potash, 10c lb.	Bleaching Powder, 2c lb.
Zinc Oxide, 1/2c lb.	Potash Alum, 1c lb.

##### Declined

Salicylic Acid, 10c lb.	Caustic Potash, 3c lb.
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Of the items that fall under this classification some very noticeable changes have set in, although it may be stated that the market on the whole is firm. However, trading during the week has not been in pronounced volume, other than the activity in soda ash, caustic soda, bleaching powder, permanganate of potash and a few other products. Price changes for the week are not numerous and where made tended toward higher levels.

Stocks of the alums, particularly the ammonia, are becoming scarcer with some sellers holding at higher prices.

**Acids**—The acids are active and various grades of lactic are in scant supply. Benzoic acid has had its best week of the season and pressing requirements have depleted stocks. Acetic acid which comes to the front in occasional spurts was more in demand. Salicylic acid still seems to be lagging and offerings are more free. Supplies of bleaching powder are far short of requirements. The market for permanganate of potash is strengthening and prices have an upward tendency. There is virtually no carbon tetrachloride in the open market. Sodium sulphide is no easier for either the 30 per cent or the 60 per cent.

**Caustic Soda**—Trading has been active, but the market was more or less erratic, with a variation of prices, and it would be difficult to determine the actual market situation. There were offers from warehouses at \$4.55 to \$4.60 per hundred with large interests holding as high as \$4.60 although there were brokers who would consider \$4.45. Over the balance of the year \$4.50 was quoted, but with no meaning in the absence of real business.

**Bleaching Powder**—There seems to be no question that price is going upward with no limit in sight, unless the Government assumes control of the industry. Sales are passing as high as 6c though offerings of fresh material are frequently heard.

**Soda Ash**—There is an active demand for both domestic and export purposes, with an extensive volume of business passing which would be considerable more were the stocks available. Actual sales of the light material in barrels were made at \$3.35 and in single bags at \$2.60. Offerings of ash in single bags were made at \$2.60 to \$2.65, warehouse, and barrel material at \$3.30 to \$3.40.

**Potash Chrome Alum**—The call is strong and available stocks are limited. Closing quotations ranged from 21c to 22c per pound.

**Ammonia Alum**—The situation is no easier and while buying interest is not strongly in evidence,

stocks are only in limited quantities. A fractional increase in price is noted and the lump product, U. S. P., is quoted at 8c to 8½c per pound, with the powdered at 8½c to 9c.

**Permanganate of Potash**—Trading has been active and factors report an improvement at the close with extensive inquiry from large consumers. The U. S. P. product which for some time was lagging in price is now generally quoted at from \$1.90 to \$2.00 and the technical from \$1.55 to \$1.85.

**Acetic Acid**—Comparatively little interest is apparent in this material and offerings of the individual firms constitute the only activity, as a rule, but during the week more interest was noted. The 99½ per cent, glacial product in carboys is quoted at 60c; the commercial 56 per cent at 29c; and the commercial 28 per cent at 15c. The latter products are packed in barrels.

**Lactic Acid**—The U. S. P. products are reported to be virtually off the market and the nominal price for the eighth revision is quoted at \$3.00 and the ninth revision at \$3.25. The other products are quoted as follows: The 22 per cent commercial dark is held at 6½c per pound, the 44 per cent medium is quoted at 14c per pound and the 50 per cent pure at 60c.

**Barium Chloride**—The market has been barely steady on this product. Quotations range from \$80 to \$100 per ton. The inquiry is active, but no large orders have been recorded and the undertone of the market is not particularly strong.

**Silicate of Soda**—Business has been chiefly confined to second hands and the market is firm. The 60 degree product, which is apparently scarcer than the 40 degree frequently appears on the market in odd lots. The 60 degree is held at 5½c to 6c per pound, works, and the 40 degree at \$2.25 to \$2.50 per cwt.

**Sulphate of Alumina**—A very firm situation prevails. Buyers who find it necessary to cover up are seemingly up against a rising market with stocks difficult to locate. The demand of late has been so strong that most leading manufacturers are sold up. The export movement to South America has also been strong. The demand for water purification purposes continues heavy. The iron free is held at \$4.50 to \$5.00 and the technical at 4c to 4½c per pound.

**Copper Sulphate**—There are fewer offerings of this material on the market, and little activity. Prices for the 88-99 per cent large crystals are generally quoted at 9½c to 10c per pound.

**Salicylic Acid**—Owing to lack of demand this item holds a rather weak position at present. Stocks are reported in liberal supply. The technical is held at 72c to 80c and the U. S. P. at 88c to \$1.00.

**Magnesia Calcined**—The high grade technical is quoted at 70c. Medium grades range from 42c to 50c, and the heavy is held at 9½c to 12c.

Control of the domestic pig tin situation is to be taken over by the War Industries Board, under a licensing system. All users and dealers in pig tin will be licensed and a complete inventory of stocks on hand and contracts unfilled will be made and, if necessary, supplies will be redistributed to equalize them according to essential uses.

**PLATINUM FOUND IN CANADA**

(Special to DRUG &amp; CHEMICAL MARKETS.)

Toronto, Canada, Oct. 5.—Owing to the great demand for platinum the Canadian Government has instructed officials of the Geological Survey to make investigations in British Columbia, where some deposits have been found. Mining has been carried on for some years to a limited extent, principally in the neighborhood of Princeton. G. C. Mackenzie and Charles Cam-sell, of the Geological Survey, who have been making investigations along the Tulameen River, have reported that there are good prospects of securing platinum in large quantities.

During the next few weeks the search will be carried on in a more extensive way. Equipment for refining platinum has been installed at the Vancouver Assay Office and operations will be started almost immediately. The Assay Office pays \$105 per troy ounce for platinum metal contained in ingots, scrap, sponge, etc., and a flat rate of \$103 per troy ounce for metals of the platinum group in the unrefined state such as nuggets and placer platinum. By this new departure Vancouver becomes the only market for platinum in Canada, and it is expected that platinum will be sent there from all parts of the country.

**QUICKSILVER OUTPUT IS SHORT**

The production of quicksilver in the United States during the first half of 1918 was 17,576 flasks, according to F. L. Ransome, of the United States Geological Survey, Department of the Interior. The total production in 1917 was 35,954 flasks, and as one-half of this is 17,977 flasks, the quantity thus far produced this year falls short by 401 flasks of that which should have been produced if the output this year is to equal that of last. As quicksilver, if not absolutely essential to the conduct of war, is a metal for which it would be exceedingly difficult to find satisfactory substitutes in all of its uses, and as an output of 36,000 flasks would, it is estimated, be barely enough to meet the demands in this country in 1918, the shortage indicated by the returns for the first half of the year calls for energetic efforts by the producers, the consumers, and the Government to increase the supply of the metal and to curtail less essential uses.

One of the notable achievements in the industry during the year has been the successful adaptation of the rotary cement kiln to quicksilver metallurgy. Eight of these furnaces are now or will soon be in operation in California, and they are expected to make an increase in production that may more than offset the falling off during the first half of the year.

**PRODUCTION OF FULLER'S EARTH**

The production of fuller's earth in 1917, as shown by a report published by the United States Geological Survey, Department of the Interior, was 78,870 short tons, valued at the mine at \$776,632 or \$10.66 a ton. The increase over 1916 was 5,048 tons, or 7 per cent, and \$69,681, or nearly 10 per cent. Since its beginning, in 1895, this industry has almost steadily increased until, in 1917, its output and the value and average price per ton of its product were the highest yet attained. The output in 1917 was nearly 11 times greater than in 1895, and the value was nearly 19 times greater.

A recent explosion in the plant of the Bayway Chemical Company, South Elizabeth, N. J., injured three men and caused \$50,000 damage. The explosion shook houses four miles away. The plant occupies almost 100 iron and frame structures where acids used in making munitions are manufactured.

**MAXIMUM ACID PRICES FIXED**

The price fixing committee of the War Industries Board has announced that, subject to the President's approval, the following maximum prices were agreed upon at a meeting between the manufacturers of sulphuric and nitric acid and the price fixing committee, held on September 26, these prices taking effect September 30 and expiring December 30.

Sulphuric acid 60 degrees Baume, \$16 per ton of 2,000 pounds.

Sulphuric acid 66 degrees Baume, \$25 per ton of 2,000 pounds.

Sulphuric acid 20 degrees oleum, \$28 per ton of 2,000 pounds.

F. o. b. at manufacturers' works in sellers' tank cars.

All strengths less than 66 degrees Baume shall be calculated from the price for 60 degrees Baume.

All strengths above 66 degrees Baume (93.2 per cent  $H_2SO_4$ ) shall be calculated from the price for 66 degrees Baume.

In carboys, in carload lots, one-half cent per pound extra.

In carboys, in less than carload lots, three-fourths cent per pound extra.

In drums, any quantity, one-fourth cent per pound extra.

Nitric acid 42 degrees Baume, 8½ cents per pound, f. o. b. manufacturers' works in carboys.

In carboys in less than carload lots one-fourth cent per pound extra.

There shall be no additional mixing charge for mixed acids, same being figured on the acidity content.

**LISTING OF DAVISON CHEMICAL STOCK**

Members of the committee on securities of the Baltimore Stock Exchange have recommended the listing of 150,000 shares of the Davison Chemical Corporation's voting trust certificates, with no par value. A notice to this effect has been forwarded to all members.

Application for formally listing the certificates was made recently by the Davison Corporation, which submitted a consolidated general balance sheet as of June 30, 1918, of the Davison Chemical Corporation, the Davison Chemical Company of Baltimore County, and the Davison Sulphur and Phosphate Company. The statements of this sheet give an idea of the immensity of the business carried on by the corporation. Under the caption of shareholders' account it enumerates the capital stock,—150,000 shares without par value \$5,445,561.09, and a surplus of \$1,300,626.94.

**SEEKS MARKET FOR ACETATE OF LIME**

A communication, conveying an offer of acetate of lime and methyl alcohol for shipment to the United States was addressed to the American consulate general in Mexico City. The chemical manufacturer's address may be obtained from the Bureau of Foreign and Domestic Commerce or its district and co-operative offices upon referring to file No. 105786.

The United States Civil Service Commission announces an open competitive examination for men only for the position of pulp and paper engineer. A vacancy in the Forest Products Laboratory, Madison, Wis., at \$3500 a year and future vacancies requiring similar qualifications will be filled from this examination. Applicants should apply at once to the Civil Service Commission, Washington, D. C., for Form 1312, for applications must be filed there before October 29.

## Color & Dyestuff Markets

### UPWARD TENDENCY IN DYES

**Scarcity of Natural Dyewoods Becoming Acute—Many Crudes and Intermediates Difficult to Obtain—Changes in Aniline Market**

### PRICE CHANGES IN NEW YORK

(Stocks in First Hands)

#### Advanced

Benzol, 2c lb.  
P-Nitraniline, 5c lb.  
Dinitrophenol, 5c lb.  
Acid Brown, 30c lb.

#### Declined

Resorcin, U.S.P., 25c lb.

The trade was greatly interested in the announcement by the National Aniline and Chemical Company that a voting trust had been formed, placing the control of the company in the General Chemical Company, the Semet-Solvay, and The Barrett Company as a guaranty against German control after the war.

In aniline colors nothing new has developed in regard to production. Manufacturers report difficulty in obtaining various intermediates used for the bulk of these colors. Trading in general was quite active, with the consuming interest continuing strong. However, due to the shortage of supplies the amount of business is somewhat curtailed. There is considerable inquiry on the part of consumers for Metanil Yellow, and the export situation is creating some difficulty in filling the demand for home consumption. Methylene Blue is also in demand with good buying orders in evidence. Bismarck Brown Y and R are commanding considerable attention with manufacturers reporting that they are well sold up on contract. Swiss imported colors are diminishing rather rapidly and the demand for these colors is increasing daily, with importations limited and not sufficient to cover the demand. In summing up the situation it appears that the general trend of the market was more to the buying than selling.

In coal tar products, the situation underwent little change during the interval. Some of the important crudes, like benzol, have been in better demand with a firmer tone developing and this condition is true also of phenol for which there has been a strong demand. Prices are tending upward. The position of toluol is still tight, with no encouragement from the Government for any further important releases for the manufacture of intermediates. Prices for most of the intermediates are firm and the demand for many of the items is very pronounced, but the prevailing conditions continue to handicap the production.

Paranitraniline is still urgently demanded by consumers; also para-amidophenol, both the base and hydrochloride. The demand for dimethylaniline has not slowed down, though stocks from some directions are reported in reasonable quantities. The cresol market is quiet, but the technical product is virtually nominal, with the U. S. P. in scant supply. Offers of benzaldehyde have not increased.

It is noted that where quotations have changed for spot stocks of dye bases and dyewoods, higher levels are named and in some cases a number of important items are said to be practically out of the market. Arrivals of logwoods and fustics have been light, and

there is little reason to expect any material improvement. The consuming call for Chinese egg albumen continues strong and large importers say they are still behind in their orders because of shipping difficulty. Cochineal, cutch, divi-divi, fustic, gambier, indigo, and logwood have all been in strong demand, and where there has been any price change on the part of holders of spot stocks the tendency has been upward.

#### Dye Bases and Dyewoods

**Albumen**—Importations of Chinese egg albumen continue restricted with the demand exceeding the supply. The price is \$1.20@\$1.25. Sellers say that the demand for this material is strong. Imported blood albumen is steady and holders are asking 85c@90c. There is no change noted in the domestic which is quoted at 65c@70c. Spray process is holding steady at 70c@73c, while the granular material is selling at 45c@47c a pound.

**Cochineal**—The market retains its nominal position. The demand is quiet and factors refuse to quote stating that former prices, which range from 80c@\$1.00, will probably continue on any material received. The gray-black variety is governed by the last quotation which is 80c@85c. Prices on rosy-black remain nominal.

**Cutch**—Practically no change has occurred in this market and prices continue steady. Stocks of Borneo are diminishing rather rapidly, with only small spot supplies available and the demand continuing strong. Consumers encounter difficulty in locating spot quantities of all varieties of cutch and say that only small quantities of Borneo stocks are obtainable.

**Divi-Divi**—Spot supplies of this material are limited, with the demand continuing strong, and in consequence prices have an upward tendency. Quotations for divi-divi extract, 25 per cent, tanning basis, are 5½c@6c per pound, with a fair inquiry noted. Spot stocks are practically exhausted and prices are nominal at about \$70@\$80 per ton.

**Fustic**—Although the demand for fustic sticks has somewhat eased off there are still a number of inquiries noted throughout the trade and offers of this material will find a ready market. The general standing of the market is steady. Sellers are offering at irregular prices, according to quality and point of origin. Prices range from \$50@\$70.

**Gambier**—An easier tone prevails in this market with inquiries somewhat limited. Supplies of this product are sufficient to cover the demand, causing a quiet market. However, prices prevailing are steady on the cube variety, ranging from 25c@30c per pound and the common grade is held at 21c per pound.

**Indigo**—No change of importance has been reported in the market for vegetable indigo, either as to price or demand. Consuming interest for natural indigo is not strong. The bulk of attention seems to be given to the synthetic product which is selling at \$1.15@\$1.25 per pound. The following prices are in vogue: Bengal \$3.00 to \$3.75; Oudes and Kurpah, \$2.25@\$2.75, and the Guatemala \$2.25@\$2.75. Fair attention is given to indigo extract which is selling at 26c@30c per pound.

**Logwood**—The nominal condition of this market continues, with no encouragement offered from the primary points, in regard to shipments. While there are no offers noted at \$50@\$55 for this material, it

seems to be the ruling quotation on spot. The demand for chips is strong with spot offerings restricted in supply. Prices on chips remain firm at 4c@6c per pound.

#### Coal Tar Crudes

**Benzol**—The market rules firm and buying interest, coincident with some fairly large contracts being closed, has seemingly brought about an increase in price. However, available stocks are still in reasonable quantities and the market maintains a strong undertone. It is the consensus of opinion that 24c in tank cars is now about the low market level, with 27c to 28c the general asking price with drums extra and returnable.

**Phenol**—Some factors in this line were in no position to quote, owing to depleted stocks and the entire situation of this crude is apparently tight. During the intervening period the persistent drawing on stocks has developed a rising market and sales for export purposes were consummated at 44½c, drums included. This is generally conceded to be about the price for export packed material, though quotations range from 46c to 48c.

**Toluol**—The position of this product remains nominal, so far as stocks are concerned, releases are not important and in the open market there is very little in quantity available. Producers are in no position to offer except with permission of the Government.

**Naphthaline**—No particular activity is noted other than the usual volume of business during this season of the year. The general quotation for the ball material ranges from 10½c to 11c; the flake from 9½c to 10c, and the crushed product from 9c to 9½c.

#### Intermediates

**Aniline Oil**—The demand is active and firm. Prices are maintained. The product in second hands is apparently in fair quantity but manufacturers are not in a position to offer liberal supplies. Quotations range from 30c to 32c.

**Aniline Salts**—There has been an active export demand and prices have firmed up in response. Local requirements are steady and active, although frequent offerings of fair quantities appear on the market. Most dealers decline to shade 44c; the market range is from 43c to 45c.

**Beta Naphthol**—The technical is more in demand. A fair volume of business is passing for all grades, but the U. S. P. is in scant supply, and is held at \$1.25 to \$1.30; the technical at 75c to 85c; and the crude at 60c to 65c.

**Paranitraniline**—The item is becoming scarcer and manufacturers are unable to offer any encouragement as to future deliveries. The demand is persistent and quotations are \$1.85 to \$2.00.

**Paratoluidine**—Most manufacturers are sold up, the stringency in the toluol situation curtailing supplies. For the material available quotations range from \$2.25 to \$2.50.

**Sulphanilic Acid**—The production is confined to a few manufacturers, and prices range from 32c to 34c.

**Monochlorbenzol**—Offerings are fully in accordance with the requirements but the demand is so light that the position is weak. However, prices are quotedably unchanged at 17c to 19c.

**Resorcin**—Prices for this product are firm, but no pressing demand is in evidence. The U. S. P. material of a high grade is quoted at \$7.50 to \$8.00 and the technical at \$4.50 to \$5.50.

**Metatoluylenediamine**—No decided large quantities of this material appear on the market, but buying interest is regular. The product is offered at \$2.25 to \$2.50.

**Para Amidophenol**—Interest in the item continues strong and it is one of the intermediates that is in pronounced demand. Trading is active and the base product is generally quoted at \$4.50 and the hydrochloride at \$4.75.

**Diethylaniline**—Quietness prevails in this market though stocks are none too liberal in supply. Prices are being maintained at \$4.00 to \$4.50.

**Diphenylamine**—The demand is active and producers are seemingly in no position to keep in stride with the call. Prices are more or less nominal, though quotations of \$1.00 to \$1.10 are heard.

#### SILK MADE BY A CHEMICAL PROCESS

##### Wood Pulp Is Transformed Into Cellulose From Which Silk Threads Are Made—Enormous Growth Of the Industry in United States

Exportation from the United States of 6,000,000 pairs of stockings made from artificial silk in the fiscal year just ended illustrates the growth in this country of the comparatively new industry of production of artificial silk from wood pulp. A compilation by The National City Bank of New York shows that the United States has now become one of the leading world producers of artificial silk, and that from being a large importer of this product we have become a very considerable exporter.

Artificial silk, according to the Bank's statement, is manufactured from cellulose produced from wood pulp through the action of certain chemicals by which the wood pulp is turned into a substitute almost exactly identical with that carried in the body of the silk worm from which he spins his cocoon which man transforms into silk threads. This artificial cellulose, practically identical with that of the silk worm, is turned into silk threads by being pressed through minute openings in metal plates, falling into a liquid which solidifies the thread.

While the textiles thus made from the artificial fiber are not yet fully equal to those produced from the natural silk, the growing use of the artificial silk is illustrated by the fact that our imports of artificial silk, chiefly in the form of yarns or threads, have aggregated about \$30,000,000 in the last decade. These, prior to the war, were drawn chiefly from Great Britain, Germany, Belgium and France, that from Great Britain alone being \$1,617,000, from Germany \$1,045,000, from Belgium \$685,000 and from France \$344,000. With the opening of the war the supply from Germany and Belgium was entirely suspended, and that from Great Britain and France materially reduced, so that the quantity of artificial silk yarn imported fell from 2,759,000 lbs. in 1914 to 293,000 in 1918.

This fall-off in the artificial silk available in other parts of the world has stimulated our own production of artificial silk, which advanced from 320,000 lbs. in 1914, the year in which the industry was established in this country, to 6,500,000 lbs. in 1917; while our exportations of manufacturers of artificial silk jumped from \$857,318 in the fiscal year 1917 to \$2,339,312 in 1916, the bulk of this being 500,957 dozen pairs of hosiery valued at \$1,932,034.

This process of turning trees into silk stockings through the transformation of wood pulp into cellulose, to produce the artificial silk threads, is simple. The wood pulp is treated with caustic soda to form a sodium cellulose and then dissolved in carbon disulphide. The product, alkaline-cellulose-xanthate is a viscous solution popularly called viscose and, after being filtered and allowed to ripen by standing, is forced through minute openings in a metal plate into a liquid which solidifies the threads, which are when completed in appearance, dimensions and chemical qualities to the similar fiber produced by the silk worm.

## The Foreign Markets

### ITALIAN DRUG PRODUCTS HIGHER

#### Continued Firmness in Japanese Camphor, Menthol, and Mint Oil—Scarcity of Phenazone Puts Up Price—Quinine Very Scarce

(Special Cable to DRUG & CHEMICAL MARKETS)

LONDON, Oct. 1.—The fall in Italian exchange has tended to increase prices of most articles from that country, and Japanese goods such as camphor, menthol, mint oil and isinglass also continue on the firmer side. Quinine is very scarce, and has been sold at 4s 3d and 4s 4d, without any prospect of an early reduction. Ammonium Bromide has been nominally lowered by the makers to 5s per lb. or 4s 6d for 1 cwt. lots, but they are unable to supply at these prices except to their pre-war bromide customers. The distribution of Potassium Bromide also remains unsatisfactory.

Agar-Agar—Sales of No. 1 Kobe strip on spot have been made at 3s 4d to 3s 6d per lb.

Aspirin continues in large demand, and the price has advanced to 15s per lb.

Bergamot Oil is dearer, at from 23s 6d to 25s per lb on spots for 38 to 39 per cent esters.

Camphor—Japanese slabs are dearer, at 4s 10½d to 5s per lb and ¼ oz. tablets firm at 6s 6d.

Cascara Sagrada—Small quantities have been sold on spot at 170s per cwt.

Citric Acid is decidedly firmer, from 3s 7d to 3s 8d per lb being now asked.

Guaiacol Carbonate is in only small supply, and 110s per lb. appears to be the lowest quotation.

Lemon Oil is now quoted to arrive at 4s 3d to 4s 6d per lb. c. i. f. but on spot 5s and even more is asked.

Menthol—Business has been done during the week at 16s 6d per lb. for Kobayashi and for Suzuki, and holders are very firm.

Mint Oil—Japan dementholized is 4s 7½d per lb. on spot, and remains firm.

Phenazone—As no consignments are coming forward from Switzerland, quotations here have touched 50s per lb. with upward tendency.

Sandalwood Oil—Several shipments of Mysore Government oil having arrived the consignees are now offering it at 50s per lb. in original packages.

Notwithstanding larger offerings of crude drugs and botanicals at the Drug Auctions, on Thursday of last week, prices were sustained. Trading was quiet.

The difference in Italian exchange caused further advances today in citric acid, tartaric acid, and oil of lemon.

Japanese camphor is very strong. Slabs are quoted at 6s 3d for spot supplies. Honey brought extreme prices at the auction sale. As high as 246s was paid for Californian brands in tins.

Ergot prices are higher. Good Spanish is quoted at 5s 9d and Russian at 5s 6d.

Jamaica sarsaparilla is firmer.

Export licenses are not granted as freely as heretofore.

Mitsui & Company received consignments of camphor aggregating 122,000 pounds.

About 1,250 gallons of Porto Rico bay rum was imported by McKesson & Robbins.

### Notes on New York Imports

Over 26,000 pounds of lemon peel formed imports consigned to banking firms.

Some 166,000 pounds of nux vomica comprised importations by Powers-Weightman-Rosengarten Company. Consignments to W. Tappenbeck aggregated over 157,000 pounds.

An importation of 10,000 pounds of buchu leaves was about equally divided between P. E. Anderson & Company and H. R. Lathrop & Company.

Over 4,000 pounds of cuttlefish bones were received during the week, of which amount about 2,500 pounds were consigned to F. Santeremo & Co.

Importations of over 18,000 pounds of gum aloes were consigned to F. B. Ross & Company.

G. Amsinck & Company, Inc., have removed their offices from 6 Hanover Square to 90-96 Wall Street.

McKesson & Robbins are credited with recent importations of over 245,000 pounds of copra.

An invoice of 30,500 pounds of citronella oil was received by the Dodge & Olcott Company.

W. J. Bush & Company received a consignment of 12,000 pounds of lemon oil.

An importation of 4,000 pounds of mercury in flasks was received by Poillion & Poirier.

Some 25,000 pounds of cinnamon have been imported by John Kissock & Company.

The largest recent importation of copra was made by the Kellogg Product Company and amounted to over 272,000 pounds.

About 13,000 pounds of poppy seed comprised an importation by T. M. Duche & Sons.

The Tartar Chemical Company received an importation of about 34,000 pounds of crude tartar.

### CONTROL OF EXPORTS TO SWEDEN

Washington, D. C., Oct. 1.—The War Trade Board has announced the procedure under which licenses will be granted for exports to Sweden. These regulations are similar to those which have previously been issued for exports to Norway and provide that all shipments must be consigned to import associations which have been formed for the purpose, under certificates to be issued by them.

Commodities for which no import associations have yet been formed may be consigned direct to the importer under certificates to be issued by the Statens Handel's Kommission. All exports must be shipped only on vessels flying the Swedish flag.

All shipments of technical oils, camphor, paraffine wax, other waxes, dyes, phosphates, rosin, soda anodes, antimony sulphide, sulphur and similar commodities must be consigned to the Chemical Industries Import Association.

All exports of rubber and rubber goods must be consigned to the Rubber Import Association. Linseed, rapeseed and other oils, must be consigned to the Oil Manufacturers' Import Association. Drugs, medical and surgical supplies, must be consigned to the Swedish Medical Board.

### CHEMICAL SITUATION IN AUSTRALIA

**Shortage of Strychnine and Phosphorus Has Become Acute — Parke, Davis & Co. to Make Their Products In Sydney—Mangrove Bark for Tanning**

(*Special Correspondence to DRUG AND CHEMICAL MARKETS*)

SYDNEY, AUSTRALIA, Sept. 2—Importation into Australia of copra either for domestic consumption or transhipment abroad is now permitted from Pacific islands under British or Allied control. In January last importation and exportation of copra were prohibited unless the written consent of the Minister for Customs had first been obtained.

Regulations relating respectively to prices for soda ash and caustic soda in the Commonwealth were lately promulgated by the war-time federal price-fixing authorities at Melbourne:

Soda ash—In metropolitan areas for quantities exceeding 1 cwt. landed cost plus 10 per cent; for quantities not exceeding 1 cwt. landed cost plus 20 per cent; outside metropolitan areas and on interstate sales actual cost of transportation may be added. Caustic soda (wholesale)—In metropolitan areas in all the states documents or on commission 2½ per cent on landed cost; from stocks 10 per cent on landed cost; on interstate sales the prices above specified plus actual cost of transportation.

The Minister for Customs recently announced that inasmuch as Turkish opium is practically unobtainable and the grades from India, Persia and Greece do not contain so large a percentage of medicinal opium and often fall below the 10 per cent of morphine standard required by the law governing the importation of opium, the application of the 10 per cent standard is suspended until the end of the war. This suspension is in the interest of the manufacture of medicinal preparations. There is a duty of 40s a pound on a 10 per cent opium.

Scarcity of phosphorus and strychnine is causing considerable alarm among farmers and sheep men, because the shortage means a great increase in rabbits, one of the agricultural curses of Australia. Phosphorus and strychnine are used in quantities for poisoning the rodents. The advisability of growing the *nux vomica* plant in Australia, and the establishment of domestic strychnine manufacture has been broached. The situation as regards rabbits borders on the acute, especially in New South Wales and Victoria. Early in July it was announced that the supplies of strychnine held by the Victorian Department of Agriculture for poisoning rabbits were nearly exhausted and a shipment of 500 ozs. ordered some months before had not arrived. It would therefore be necessary to suspend the poisoning of rabbits on crown lands at an early date. Subsequently it was announced that the Victorian Lands Department had received 1000 ozs. of the 5000 ozs. ordered from England six months previously, but that almost the whole shipment would be required by the Department. Lately the federal Minister in Charge of Foodstuffs informed the Victorian Minister for Lands that efforts were being made to induce the British and American authorities to allow the manufacture and exportation to Australia of strychnine and phosphorus, and that he had been advised that a steamer bound for Australia was bringing a shipment of phosphorus.

In addressing the Sydney Chamber of Commerce the middle of August Dr. F. M. Gellatly, Director of the Commonwealth Institute of Science and Industry (an institution founded by reason of the war and intended comprehensively to develop Australia's resources and industries) said in speaking of mangrove bark as a tanning material that the Institute's experi-

ments prompted the belief that the use of mangrove bark instead of wattle bark would mean a reduction of 40 per cent in the cost of tanning, and that the experiments had eliminated the strong odor and red coloring which were characteristic of leather tanned with mangrove bark.

Parke, Davis & Company have just completed a laboratory in Sydney in which it is intended, as soon as the necessary machinery arrives, to manufacture the greater portion of the products they catalogue in Australia. The laboratory is not an outcome of the war but had been projected prior to the war.

### NEW IMPORT LICENSE RULES

The War Trade Board announces, in a new ruling (W. T. B. R. 224), the issuance of a new general import license to be known as P. B. F. No. 27, which will be effective for shipments made on or after October 1, 1918. This license covers the importation into the United States from the United Kingdom, France and Italy or their European or Mediterranean African possessions or protectorates of all commodities, except those hereinafter enumerated, provided the specific goods sought to be imported originated in said countries, or in said possessions or protectorates. The following commodities, of interest in the drug, chemical and dyestuff industries, are specifically excluded from the terms of the license:

Borax, caffeine, tapioca, casein, castor beans, castor oil, chloride of lime, chrome, chrome ore and chemicals extracted therefrom; cobalt, cobalt ore and chemicals extracted therefrom; cocoa beans or cocoa; coconuts meat; copper ore and copper concentrates; corundum, emery and emery ore; cyanide of soda, ferro manganese, flaxseed, graphite, nitrate of soda, paraffine, platinum, pyrites, shellac, tanning materials, tin.

The list of commodities enumerated is a tentative one. A detailed list classified according to the tariff paragraphs is being prepared and will be announced shortly.

### NATIONAL ANILINE FORMS VOTING TRUST

The National Aniline and Chemical Company, which has been criticised in the trade as pro-German owing to the number of former officials of the Cassella Color Company who hold high positions in the organization, announces that it has formed a voting trust as a guarantee that the company will not fall into German hands after the war. The statement follows:

As a guarantee to those who have given their patriotic support to this industry during its initial stages that it shall not fall into the hands of the Germans at the close of the war, the control of the company has been placed in a voting trust on file with the Guarantee Trust Company of New York. This control is in the General Chemical Company of New York, the Semet-Solvay Company of Syracuse, The Barrett Company of New York and their associates.

Walter W. Stein, president of the Primos Chemical Company of Primos, Pa., died last week. Mr. Stein was fifty-six years of age. Born in Germany, he came to this country when seventeen years of age. Sixteen years ago he became president of the Primos firm. On September 3, the Alien Property Custodian, A. Mitchell Palmer, sold at public auction 87,097 pounds of ferrovanadium which had been manufactured by the Primos Company. The sales realized nearly \$500,000 and the proceeds will be invested in the Fourth Liberty Loan.

# Prices Current of Drugs & Chemicals, Heavy Chemicals & Dyestuffs in Original Packages

**NOTICE** — The prices herein quoted are for large lots in Original Packages as usually Purchased by Manufacturers and Jobbers.

In view of the scarcity of some items subscribers are advised that quotations on such articles are merely nominal, and not always an indication that supplies are to be had at the prices named.

## Drugs and Chemicals

Acetanilid, C.P., bbls. bulk lb.	.72	.74
Acetone	.254	.254
Acetophenetidin	2.90	3.05
*Aconite, 1/2-oz. vials	—	—
Agar Agar, See Isinglass.		
No. 1	.85	.86
No. 2	.80	.81
No. 3	.75	.76
Alcohol 180 proof	—	4.91
190 proof, U.S.P.	—	4.97
Cologne Spirit, 190 proof	—	5.06
Wood, ref. 95 p.c.	.91	.92
97 p.c.	.94	.95
Denatured, 180 proof	.68	.69
188 proof	.69	.70
Aldehyde	1.25	1.45
Almonds, bitter	.41	.45
Sweet	.28	.29
Meal	.35	.37
Aloin, U.S.P. powd.	.96	1.00
Aluminum (see Heavy Chemicals)	—	—
Ambergris, black	10.00	14.00
Grey	22.00	23.75
Ammonium, Acetate, cryst.	.80	.85
Benzoate, cryst. U.S.P.	—	11.00
Bichromate, C.P.	—	1.20
Bromide, gran., bulk	.75	.76
Carb. Dom. U.S. Kegs, powd.	.14	14%
Hypophosphite	—	2.15
Iodide	—	4.30
Molybdate, Pure	—	7.00
Muriate, C.P.	—	.45
Nitrate, cryst., C.P.	.25	.26
Gran.	—	.54
Oxalate, Pure	—	1.15
Persulphate	—	1.25
Phosphate (Dibasic)	.50	.60
Salicylate	1.60	1.63
Amyl Acetate, bulk, drums.gal.	5.30	5.35
Antimony Chlor. (Sol. butter of Antimony)	.18	.20
Needle powder	.13	.14
Sulphate, 16-17 per cent. free sulphur	.35	.70
Antipyrine, bulk	19.50	20.25
Apomorphine Hydrochloride oz.	—	31.20
Areca Nuts	.34	.39
Powdered	.44	.45
Argols	.16	.18
*Arsenic, red	.45	.54
White	.09	.10
Atropine, Alk. U.S.P. 1-oz. v. oz.	—	47.50
Sulphate, U.S.P. 1-oz. v. oz.	—	37.50
Balm of Gilead Buds	.70	.85
*Barium Carb. prec. pure	—	—
*Chlorate, pure	.50	.60
Bay Rum, Porto Rico	3.65	3.70
St. Thomas	3.75	3.90
Benzaldehyde (see bitter oil of almonds)		
Benzol, See Coal Tar Crudes		
Berberine, Sulphate, 1-oz.c.v.oz.	2.50	3.00
Beta Naphthol (see Intermediates)		
Bismuth, Citrate, U.S.P.	—	3.50
Salicylate	—	3.35
Subcarbonate, U.S.P.	—	3.50
Subgalate	—	3.50
Subiodide	—	5.60
Subnitrate	—	3.30
Tannate	—	3.15
Borax, in bbls., crystals	.073	.084
Crystals, U.S.P., Kegs	.084	.09
Bromine, tech., bulk	.75	.76

\*Nominal.

†Fixed Government price.

## WHERE TO BUY

Conserve:—

## GLYCERINE

By using:—

## NULOMOLINE "T.P."

And save money.

All users of Glycerine should study the many advantages of Nulomoline "T.P."

Manufactured by:

## THE NULOMOLINE COMPANY

Distributed by:  
W. J. BUSH & CO., Inc.  
100 William Street, New York City

Burgundy Pitch, Dom.	lb.	.06	.08
*Imported	lb.	—	—
Cadmium Bromide, crystals	lb.	1.75	1.80
Iodide	lb.	—	4.40
Metal sticks	lb.	1.50	1.60
Caffeine, alkaloid, bulk	lb.	11.50	12.25
Hydrobromide	lb.	10.70	12.00
Citrated, U.S.P.	lb.	8.00	8.05
Phosphate	lb.	14.00	15.00
Sulphate	lb.	15.00	16.00
Calcium Glycerophosphate	lb.	1.80	1.85
*Hypophosphite, 100 lbs.	lb.	1.00	1.05
Iodide	lb.	—	4.10
Phosphate, Precip.	lb.	.21	.23
Sulphocarbonate	lb.	1.02	1.07
Calomel, see Mercury.			
Camphor, Am. ref'd blbs. bkt.	lb.	—	1.34
Square of 4 ounces	lb.	—	1.35
16's in 1-lb. carton	lb.	—	1.38
24's in 1-lb. carton	lb.	—	1.37
32's in 1-lb. carton	lb.	—	1.39
Cases of 100 blocks	lb.	—	1.35
Japan, refined, 2½-lb. slabs	lb.	1.72	1.75
Monobromated, bulk	lb.	3.75	3.80
Cantharides, Chinese	lb.	.99	1.00
Powdered	lb.	1.15	1.20
Russian	lb.	3.95	4.20
Carbox disulphide, tech 500 lbs. bulk	lb.	4.55	4.65
Charcoal Willow, powdered	lb.	.09	.10
Casein, C. P.	lb.	.45	.49
Cerium Oxalate	lb.	.60	.62
Chalk, prec. light, English	lb.	.04	.04
Heavy	lb.	.03	.05
Chloral Hydrate, U.S.P.	lb.	—	—
crystals, bottles incl'd,			
100 lb. lots	lb.	1.58	1.60
100 lb. lots	lb.	.06	.07
Charcoal Willow, powdered	lb.	.07	.09
Chlorine, liquid	lb.	.15	.24
Chloroform, liquids	lb.	.63	.70
Chrysarobin, U.S.P.	lb.	5.30	5.40
Chynchonin, Alk. crystals	oz.	—	1.06
Cinchonine, Alk. crystals	oz.	—	1.06
Sulphate	lb.	—	.35
Cinnabar	lb.	—	3.45
Civet	lb.	2.50	2.70
Cobalt, pow'd (Fly Poison)	lb.	.45	.49
Oleate	lb.	.81	.96
Cocaine, Hydrochlor. gran.	lb.	11.20	11.25
cryst. bulk	lb.	11.25	11.50
Cocoa Butter, bulk	lb.	.30	.32
Cases, fingers	lb.	.40	.41
Codeine, Alk. Bulk	oz.	—	10.15
Nitrate, Bulk	oz.	—	9.10
Phosphate, Bulk	oz.	—	7.60
Sulphate, Bulk	oz.	—	8.10
Collodion, U. S. P.	lb.	.41	.45

\*Nominal.

†Govt. fixed price.

Colocynth, Apples, Trieste	lb.	.30	.35
Pulp, U.S.P.	lb.	.45	.49
Spanish Apples	lb.	.39	.40
Copper Chloride, pure cryst.	lb.	—	—
Olate, mass, 1-oz. jars,	20 p.c.	—	1.16
Corrosive Sublimate, see Mercury.			
Cotton Soluble	lb.	.78	1.00
Coumarin, refined	lb.	32.00	34.00
Cream of Tartar, cryst. U.S.P.	lb.	—	—
Powdered, 99 p.c.	lb.	—	—
Cresote, U.S.P.	lb.	1.85	1.95
*Carbonate	lb.	26.00	27.50
Cresol, U.S.P.	lb.	.18	.20
Cuttlefish Bones, Trieste	lb.	.60	.63
Jewelers, large	lb.	1.74	1.80
Small	lb.	1.75	1.80
French	lb.	.43	.49
Dover's Powder, U.S.P.	lb.	2.90	3.00
Dragon's Blood, Mass.	lb.	.34	.36
Reeds	lb.	4.90	5.20
Emetine, Alk., 15 gr. vials	ea.	—	2.75
Hydrochloride, U.S.P. 15 gr. vials	ea.	—	1.25
Epsom Salts (see Mag. Sulph.)			
Ergot, Russian	lb.	1.75	1.80
Spanish	lb.	1.75	1.80
Ether, U.S.P., 1900	lb.	—	28
Washed	lb.	—	.32
U.S.P., 1880	lb.	—	.24
Eucaalyptol	lb.	1.35	1.45
Formaldehyde	lb.	—	—
Gelatin, silver	lb.	1.43	1.45
"Gold"	lb.	—	—
Glycerin, C. P., bulk	lb.	—	—
Drums and bbls., added	lb.	—	.60
C. P. in cans	lb.	—	.62
Dynamite, drums included	lb.	.60	.60
Saponification, loose	lb.	.414	.42
Soap, Lye, loose	lb.	.375	.38
Grains of Paradise	lb.	1.40	1.50
Guaiacol, liquid	lb.	18.00	19.00
Guarana	lb.	.95	1.00
Haarlem Oil, bottles	—	8.45	9.00
Hexamethylenetetramine	lb.	1.10	1.15
Hops, N. Y., 1917 prime	lb.	.45	.50
Pacific Coast, 1917, Prime	lb.	.23	.24
Hydrogen Peroxide, U.S.P., 10 gr. lots			
4-oz. bottles	gross	—	7.50
12-oz. bottles	gross	—	16.50
16-oz. bottles	gross	—	20.00
Hydroquinone, bulk	lb.	—	2.70
Ichthyol	lb.	—	—
Iodine, Resublimed	lb.	4.25	4.30
Iodoform, Powdered, bulk	lb.	—	5.55
Crystals	lb.	—	1.15
Iron Citrate, U.S.P.	lb.	—	1.00
Phosphate, U.S.P.	lb.	—	1.05
Pyrophosphate, U.S.P.	lb.	—	1.05
Salicylate	lb.	.80	.81
Isinglass, American	lb.	7.50	7.80
Russian	lb.	—	—
See Agar Agar			
Kamala, U.S.P.	lb.	3.20	3.40
Kola Nuts, West Indies	lb.	.25	.28
Lanolin, hydrous, cans U.S.P.	lb.	.39	.40
Anhydrous, cans	lb.	.49	.51
Lead Iodide, U.S.P.	lb.	—	2.95
Licorice, U.S.P., Syrian	lb.	.24	.29
"Sticks, bbls. Corigliano	lb.	.82	.83
Lupulin	lb.	.93	1.00
Lycopodium, U.S.P.	lb.	1.65	1.70
Magnesium Carb. U.S.P. bbls.	lb.	.24	.30
Glycerophosphate	lb.	—	4.55
Hypophosphite	lb.	1.65	1.70
Iodide	lb.	—	4.85
Oxide, tins light	lb.	—	1.10
Peroxide, cans	lb.	—	2.15
Salicylate	lb.	1.30	1.37
Sulphate, Epsom Salts, tech	lb.	—	—
100-lbs.	lb.	3.37	3.45
U. S. P.	100-lbs.	3.62	3.87
Manganese Glycerophos	lb.	3.35	3.40
Hypophosphite	lb.	1.65	1.70
Iodide	lb.	—	4.85
Peroxide	lb.	.75	.80
Sulphate, crystals	lb.	.60	.62
Small flake	lb.	.83	1.00
Large flake	lb.	.67	.69
Menthol, Japanese	lb.	5.75	6.00
Mercury, flasks, 75 lbs.	lb.	1.25	1.27
Bisulphite	lb.	—	1.53
Blue Mass	lb.	—	.95
Powdered	lb.	—	.97
Blue Ointment, 30 p.c.	lb.	—	.93
50 p.c.	lb.	—	1.30

\*Nominal.

†Govt. fixed price.

## Drugs &amp; Chemicals, Heavy Chemicals and Dyestuffs in Original Packages

Mercury, Calomel, Amer...	lb.	—	2.00
Corrosive Sublimate cryst...	lb.	—	1.84
Powdered, Granular	lb.	—	1.79
Iodide, Green	lb.	—	4.25
Red	lb.	—	4.35
Yellow	lb.	—	4.25
Red Precipitate	lb.	—	2.19
Powdered	lb.	—	2.26
White Precipitate	lb.	—	2.29
Powdered	lb.	—	2.34
Methylene Blue, medicinal	lb.	15.00	17.00
Milk, powdered	lb.	.16	.19
Minbaine Oil, refined, drums	lb.	.175	.195
Morphine, Acet. bulk	oz.	—	12.80
Sulphate, bulk	oz.	—	11.80
Diacetyl Hydrochloride, 5-oz.	oz.	—	15.90
Moss, Iceland	lb.	.23	.24
Irish	lb.	.11½	.13
Musk, pods, Cab	oz.	12.00	12.40
Tongquin	oz.	25.00	26.00
Grain, Cab	oz.	18.50	19.00
Tongquin	oz.	38.00	39.50
Druggists	oz.	—	—
Synthetic	lb.	30.00	30.10
Naphthalene, See Coal Tar Products.	lb.	—	—
Nickel and Ammon. Sulphate	lb.	—	.22
Sulphate	lb.	.27	.29
Novocain (See Procaine)	lb.	—	—
Nux Vomica, whole	lb.	.13	.14
Powdered	lb.	.16	.18
Opium, cases, U.S.P.	lb.	—	21.50
Granular	lb.	—	24.50
Powdered, U.S.P.	lb.	—	23.50
Oxgall, pure U.S.P.	lb.	1.50	1.55
Papain	lb.	4.70	5.20
Paraffin White Oil, U.S.P. gal.	gal.	3.10	3.60
Paris Green, kegs	lb.	.40	.42
Petrolatum, light amber bbls	lb.	.05½	.07
Cream White	lb.	.07½	.08
Lily White	lb.	.13	.14
Snow White	lb.	.15	.15½
Phenolphthalein	lb.	5.50	6.00
Phosphorus, yellow	lb.	1.30	1.40
Red	lb.	1.70	1.80
Pilocarpine	oz.	16.00	20.00
Piperin	lb.	13.00	18.00
Poppy Heads	lb.	1.45	1.50
Potassium acetate	lb.	1.50	1.55
Bicarb.	lb.	.70	.75
C. P.	lb.	.45	.60
Bisulphate	lb.	.75	.85
Bromide, (Bulk, gran.)	lb.	1.25	1.26
Carbamate, crystals, yellow,	lb.	—	1.05
tech. 1-lb. c. b. 10	lb.	—	1.05
Citrate, bulk	lb.	—	1.50
Glycerophosphate	lb.	—	1.45
Iodide, bulk	lb.	—	3.75
Hypophosphite, bulk	lb.	2.15	2.20
Lactophosphate	lb.	—	.25
Permanganate, U.S.P.	lb.	1.75	1.90
Salicylate	lb.	2.00	3.75
Sulphate, C.P.	lb.	1.11	1.16
Tartrate, powdered	lb.	1.31	1.32
Procaine, oz. bottles	lb.	7.00	7.50
5 gr. bottles	lb.	1.50	1.60
Quinine, Bisulphate, 100 oz.	oz.	—	.90
tins	oz.	—	.90
Sulphate, 100 oz. tins	oz.	—	.90
50-oz. tins	oz.	—	.91
25-oz. tins	oz.	—	.92
5-oz. tins	oz.	—	.94
1-oz. tins	oz.	—	.98
Second hands, Java	oz.	.91	.92
Second hands, American	oz.	—	1.00
*Amsterdam	oz.	—	—
*German	oz.	—	—
Java	oz.	—	—
Quinidine Alk. crystals, tins	oz.	—	1.06
Sulphate, tins	oz.	—	.70
Resorcin crystals, U.S.P.	lb.	7.75	7.95
Rochelle Salt, crystals, bxs	lb.	—	.47
Powdered, bbls	lb.	—	.46½
Saccharin, U.S.P., soluble	lb.	23.00	23.50
U.S.P., Insoluble	lb.	24.00	24.50
Salicin, bulk	lb.	30.00	30.50
Salol, U.S.P., bulk	lb.	—	1.50
Sandalwood	lb.	—	.80
Ground	lb.	—	.65
Santonin, cryst., U.S.P.	lb.	47.00	47.50
Powdered	lb.	48.00	49.00
Scammony, resin	lb.	2.95	3.20
Powdered	lb.	3.05	3.30
Seidlite Mixture, bbls	lb.	—	.36
Silver Nitrate, 500-oz. lots	oz.	—	.63½
Soap, Castile, white, pure	lb.	.74	.80
Marseilles, white	lb.	.18	.19
Green, pure	lb.	.17	.18
Ordinary	lb.	.14	.15
Sodium, Acetate, U.S.P., gran.	lb.	.25	.29
Benzoate, gran. U.S.P.	lb.	2.75	2.90
Bicarb. U.S.P., powd., bbls	lb.	.02½	.03
Bromide, U.S.P., bulk	lb.	.65	.66

## WHERE TO BUY

## POTASSIUM CARBONATE

all grades

## SACCHARIN INSOLUBLE

spot and future

## THE W. K. JAHN COMPANY

13-21 Park Row • N. Y. City

Sodium, Cacodylate

Chlorate, U.S.P. 8th Rev.

crystals, c. b. 10

Granular, c. b. 10

Citrate, U.S.P. cryst.

Granular, U.S.P.

Glycerophosphate, crystals

Hypophosphite, U.S.P.

Iodide, bulk

Phosphate, U.S.P., gran.

Recryst.

Dried

Salicylate, U.S.P.

Sulph. (Glauber's Salt)

Tungstate

Spermaceti, blocks

Spirit Ammonia, U. S. P.

Aromatic, U. S. P.

Nitrous Ether, U. S. P.

Ether Comp.

Starax, liquid cases

Strontium Bromide, bulk

Iodide, bulk

Nitrate

Salicylate, U.S.P.

Strychnine Alkdl., cryst.

Acetate

Nitrate

Sulphate, crystals, bulk

Sugar of Milk, powdered

Sulphonal, 100-oz. lots

Sulphonymethane, U.S.P.

Sulphur, roll, bbls.

Flour, com'1.

Flowers

Tamarinds, bbls

Kegs

Tartar Emetic, tech.

U. S. P.

Terpin Hydrate

Thymol, crystals, U.S.P.

Iodide, U.S.P., bulk

Tin, bichloride, bbls.

Oxide, 500 lb. bbls.

Toluol. See Coal Tar Crudes

Turpentine, Venice, True

Artificial

Spirits, see Naval Stores.

Vanillin

Witch Hazel Ext., dble dist.

bbl.

Zinc Carbonate

Chloride

Iodide, bulk

Metallic, C. P.

Oxide, U.S.P., bbls.

## Acids

Acetic, 28 p.c.

Glacial

Nominal

Acetyl-salicylic

Benzyl, from gum

U.S.P. ex. toluol

Boric, cryst., bbls.

Powdered, bbls.

Butyric, Tech., 60 p.c.

Carbophoric

Carbolic crys., U.S.P., dts.

1-lb. bottles

5-lb. bottles

50 to 100-lb. tins

Chromic, U.S.P.

Chrysophanic

Citric, crystals, bbls.

Powdered

Second hands

Cresylic, 95-100 p.c.

Formic, 75 p.c., tech.

Gallic, U.S.P., bulk

Glycerophosphoric

Hydriodic, sp. g. 1.130

Hydrobromic, Conc.

Hydrocyanic, 2 p.e. U.S.P.

Hydrofluoric, 48 p.e. C.P.

Nominal.

Hydrosilicofluoric, 10 p.e. tech. lb.

20 p.e. tech., ..... lb.

Hypophosphorous, 50 p.e. lb.

U. S. P. 10 p.e. lb.

\*Lactic, U.S.P., VIII. lb.

\*U.S.P., IX. lb.

Molybdic, C.P. lb.

.07 — .07½

Muriatic 20 deg. carboys lb.

Nominal

Nitric, 42 deg. carboys lb.

.08½ Gov. pr.

Nitro Muriatic ..... lb.

Oxalic, cryst., bbls. lb.

.42 — .44

\*Picric, kegs lb.

Phosphoric, 85-88 p.e. syrupy

U. S. P. lb.

50 p.e. tech. lb.

Pyrogallic, resublimed lb.

Crystals, bottles lb.

Pyroligneous, purified lb.

Technical ..... gal.

Salicylic, Bulk, U.S.P. lb.

.65 — 1.00

Stearic, triple pressed lb.

.26 — .28

Sulphuric, C. P. lb.

.07 — .08

"66 deg. tech. f.o.b. wks. ton

28.00 Gov. pr.

"Silphurous ..... lb.

Tannic, technical ..... lb.

.65 — .80

U.S.P., bulk ..... lb.

1.48 — 1.52

Tartaric Crystals, U.S.P. lb.

.86 — .93

Powdered, U.S.P. lb.

.85 — .92

Trichloroacetic, U.S.P. lb.

4.40 — 4.50

## Essential Oils

Imond, bitter ..... lb.

Artificial, chlorine traces ..... lb.

5.20 — 5.30

Free from chlorine ..... lb.

5.35 — 5.55

Amber, crude ..... lb.

2.40 — 2.50

Rectified ..... lb.

2.75 — 2.85

Anise ..... lb.

1.10 — 1.30

Bay ..... lb.

3.00 — 3.10

Bergamot ..... lb.

5.75 — 5.85

"Synthetic ..... lb.

3.50 — 3.75

Bois de Rose ..... lb.

5.50 — 7.50

Cade ..... lb.

1.25 — 1.30

Jajuput, bottle, Native, cs. ..... lb.

.75 — .80

Camphor, art. ..... lb.

.23 — .25

Japanese white ..... lb.

8.25 — 8.30

Caraway, Rectified ..... lb.

2.25 — 2.30

Cassia, 75-80 p.e. tech. ..... lb.

2.45 — 2.55

Lead, Free ..... lb.

Redistilled, U.S.P. ..... lb.

2.90 — 3.15

Cedar Leaf ..... lb.

1.25 — 1.30

Cedar Wood ..... lb.

.18 — .20

Coriander ..... lb.

28.00 — 29.00

Cubebas ..... lb.

7.90 — 8.10

Cumin ..... lb.

11.00 — 11.25

Eriigeron ..... lb.

3.25 — 3.35

Eucalyptus, Australian ..... lb.

.65 — .70

Fennel, sweet ..... lb.

4.00 — 4.15

Geranium, Rose Algerian ..... lb.

11.00 — 12.00

Bourbon (Reunion) ..... lb.

9.50 — 9.70

Turkish ..... lb.

4.75 — 5.00

\*Ginger ..... lb.

7.75 — 7.80

Gingergrass ..... lb.

— —

Hemlock ..... lb.

1.20 — 1.30

Juniper Berries, rect. ..... lb.

11.25 — 11.50

Twice rect. ..... lb.

12.75 — 13.00

Wood ..... lb.

2.00 — 2.15

Lavender Flowers ..... lb.

5.65 — 5.75

Garden ..... lb.

1.10 — 1.15

Spike ..... lb.

1.45 — 1.55

Lemon ..... lb.

.25 — 1.35

Lemongrass, Native ..... lb.

1.40 — 1.45

Limes, Expressed ..... lb.

5.50 — 5.75

Distilled ..... lb.

2.25 — 2.30

Linaboe ..... lb.

5.00 — 5.10

Mace, distilled ..... lb.

## Drugs &amp; Chemicals, Heavy Chemicals and Dyestuffs in Original Packages

Petit Grain, So. America	lb.	3.50	—	3.60
French	lb.	8.50	—	8.65
Pinus Sylvestrus	lb.	—	—	6.50
Pumilio	lb.	—	—	6.00
Rose, French	oz.	25.00	—	28.00
Synthetic, red	lb.	—	—	36.00
Rosemary, French	oz.	—	—	28.00
Safrol	lb.	.45	—	.47
Sandalwood, East India	lb.	13.50	—	13.60
Sassafras, natural	lb.	2.20	—	2.40
Artificial	lb.	.41	—	.42
Savin	lb.	7.00	—	7.25
Spruce	lb.	1.25	—	1.35
Sprig mint	lb.	—	—	3.50
Tansy, Amer.	lb.	4.50	—	4.70
Thyme, red, French	lb.	1.90	—	2.00
White, French	lb.	2.00	—	2.10
*Wine, Ethereal, light	lb.	—	—	—
Wintergreen, leaves, true	lb.	5.00	—	5.20
Birch, Sweet	lb.	4.00	—	4.25
Synthetic, U.S.P., bulk	lb.	.85	—	1.00
Wormseed, Baltimore	lb.	10.00	—	12.00
Wormwood, Dom.	lb.	5.50	—	5.60
Ylang Ylang, Bourbon	lb.	12.00	—	15.00
Manila	lb.	27.00	—	29.00
Artificial	lb.	10.00	—	10.50

## OLEORESINS

*Aspidium (Malefern)	lb.	17.50	—	18.00
Capiscum, 1-lb. bottles	lb.	4.75	—	4.85
Cubeb	lb.	7.00	—	7.25
Ginger	lb.	3.75	—	3.88
*Parsley Fruit (Petroselinum)	lb.	6.75	—	7.50
*Pepper, black	lb.	—	—	7.00
*Malefern	lb.	12.00	—	12.20
Mullein (so-called)	lb.	5.00	—	5.25
Orris, domestic	lb.	—	—	20.00
Imported	lb.	—	—	20.00

## Crude Drugs

## BALMAMS

Copaiba, Para	lb.	.59	—	.64
South American	lb.	.77	—	.79
Fir, Canada	lb.	5.90	—	6.00
Oregon	gal.	1.74	—	1.79
Peru	lb.	3.30	—	3.40
Tolu	lb.	1.02	—	1.08

## BARKS

Angostura	lb.	.32	—	.34
Basswood Bark, pressed	lb.	.18	—	.21
Blackhawk, of root	lb.	.49	—	.55
of Tree	lb.	.34	—	.39
Buckthorn	lb.	.23	—	.24
Calisaya	lb.	.74	—	.84
Cascara Sagrada	lb.	.18	—	.19
Cascarilla, quills	lb.	.22	—	.23
Siftings	lb.	.12	—	.13
Chestnut	lb.	.10	—	.10½
Cinchona, red quills	lb.	.89	—	.120
Broken	lb.	.85	—	.98
*Yellow "quills"	lb.	—	—	—
*Broken	lb.	.69	—	.74
*Loxa, pale, bs.	lb.	—	—	—
*Powdered, boxes	lb.	—	—	—
*Maracaioba, yellow, powd.	lb.	—	—	—
Condurango	lb.	.12	—	.14
Cotton Root	lb.	.14	—	.15
Cramp (true)	lb.	.50	—	.52
Cramp (so-called)	lb.	.11	—	.12
Dogwood, Jamaica	lb.	.08½	—	.10
Elm, grinding	lb.	.10	—	.11
Select bds.	lb.	.19	—	.20
Ordinary	lb.	.09	—	.10
Hemlock	lb.	.08	—	.08½
Lemon Peel	lb.	.09½	—	.10½
Mezereon	lb.	.22	—	.23
Oak, red	lb.	.06½	—	.07
White	lb.	.04	—	.05
Orange Peel, bitter	lb.	.06	—	.07
Malaga, sweet	lb.	.11½	—	.12½
Trieste, sweet	lb.	.13	—	.13½
Prickly Ash, Southern	lb.	.13½	—	.14½
Northern	lb.	.14½	—	.16
Pomegranate of Root	lb.	.39	—	.42
of Fruit	lb.	.30½	—	.31
Sassafras, ordinary	lb.	.13	—	.14
Select	lb.	.23	—	.24
Simaruba	lb.	.59	—	.63
Soap, whole	lb.	.11	—	.12
Cut	lb.	.18	—	.19
Crushed	lb.	.17	—	.18
Wahoo, of Root	lb.	.42	—	.43
of Tree	lb.	.23	—	.24

\*Nominal.

## WHERE TO BUY

**Antoine Chiris Co.**  
NEW YORK  
IMPORTERS & MANUFACTURERS  
ESSENTIAL OILS  
SYNTHETIC CHEMICALS

**Fritzsch Brothers**

New York

**ESSENTIAL - OILS**

Willow, Black	lb.	.08	—	.09
White	lb.	.16	—	.17
White Pine	lb.	.07	—	.08
White Poplar	lb.	.04	—	.05
Wild Cherry	lb.	.09½	—	.10
Witch Hazel	lb.	.07	—	.08

## BEANS

Calabar	lb.	.59	—	.62
St. Ignatius	lb.	.23	—	.24
St. John's Bread	lb.	.30	—	.32
Tonka, Angostura	lb.	1.00	—	1.10
Para	lb.	.65	—	.68
Surinam	lb.	.69	—	.74
Vanilla, Mexican, whole	lb.	4.45	—	6.00
Cuts	lb.	2.95	—	3.15
Bourbon	lb.	2.10	—	2.12
South American	lb.	2.95	—	3.20
Tahiti, White Label	lb.	1.65	—	.70
Green Label	lb.	1.55	—	1.60

## BERRIES

Cubeb, ordinary	lb.	1.24	—	1.29
*XX	lb.	1.30	—	1.35
Powdered	lb.	1.32	—	1.34
Fish	lb.	.48	—	.58
Horse, Nettle, dry	lb.	.73	—	.97
Juniper	lb.	.08	—	.09
Laurel	lb.	.07	—	.09
Poke	lb.	.10	—	.11
Prickly Ash	lb.	.10½	—	.11
Saw Palmetto	lb.	.14	—	.16
Sloe	lb.	.49	—	.54
Sumac	lb.	.06	—	.07

## FLOWERS

Arnica	lb.	.89	—	.94
Powdered	lb.	1.01	—	1.05
Borage	lb.	.59	—	.69
Calendula, Petals	lb.	2.45	—	3.15
*Chamomile, German	lb.	—	—	—
Hungarian type	lb.	.46	—	.49
Roman	lb.	.95	—	1.00
*Spanish	lb.	.42	—	.50
Clover Tops	lb.	.17	—	.19
Dogwood	lb.	.15	—	.16
Elder	lb.	.29	—	.31
Insect, open	lb.	.29	—	.33
Closed	lb.	.38	—	.39
*Powd. Flowers and stems	lb.	.32	—	.35
Powd. Flowers	lb.	.33	—	.35
*Kouoso	lb.	—	—	—
Lavender, ordinary	lb.	.24	—	.25
Select	lb.	.31	—	.33
Linden, with leaves	lb.	.35	—	.36
Without leaves	lb.	.47	—	.49
Malva, blue	lb.	2.55	—	2.65
Black	lb.	.40	—	.45
Mullein	lb.	1.78	—	1.87
Orange	lb.	1.95	—	2.00
Ox-Eye, Daisy	lb.	.04½	—	.05
Poppy, red	lb.	.95	—	1.10
Rosemary	lb.	.69	—	.70
Saffron, American	lb.	.38	—	.40
Valencia	lb.	15.45	—	15.70
Tilia (see Linden)	lb.	—	—	—

## GUMS

Aloes, Barbados	lb.	1.08	—	1.13
Cape	lb.	.18½	—	.19
Curacao, cases	lb.	.09	—	.09½
*Socotrine, whole	lb.	.74	—	.79
*Powdered	lb.	.79	—	.84

\*Nominal.

Ammoniac, tears	lb.	1.44	—	1.48
Powdered	lb.	1.49	—	1.53
*Arabic, firsts	lb.	.50	—	.51
*Seconds	lb.	.28	—	.29
Sorts, Amber	lb.	.34	—	.36
Asafoetida, whole	lb.	1.80	—	2.00
Powdered, U.S.P.	lb.	2.00	—	2.25
Benzoin, Siam	lb.	1.35	—	1.50
Sumatra	lb.	.30	—	.40
Catechu	lb.	.20	—	.23
*Chicke, Mexican	lb.	1.00	—	1.15
Euphorbiun	lb.	.23	—	.25
Powdered	lb.	.28	—	.30
Galbanum	lb.	1.35	—	1.45
Gamboge	lb.	1.85	—	1.90
*Guaiac	lb.	1.70	—	1.75
Hemlock	lb.	.83	—	.90
Kino	lb.	.49	—	.59
Mastic	lb.	1.23	—	1.38
Myrrh, Select	lb.	.75	—	.80
Sorts	lb.	.70	—	.78
Olibanum, siftings	lb.	.62	—	.68
Tears	lb.	.15	—	.17
Sandarac	lb.	.71	—	.72
*Senegal, picked	lb.	.34	—	.39
Sorts	lb.	.28	—	.30
Spruce	lb.	.63	—	.72
Thus, per bbl.	lb.	280	lb.	13.80

## \*Tragacanth, Aleppo first

lb. 2.75 — 2.90

\*Seconds

lb. 2.50 — 3.20

\*Thirds

lb. 2.75 — 2.95

\*Turkey, firsts

lb. — — —

\*Seconds

lb. — — —

\*Thirds

lb. — — —

## LEAVES AND HERBS

Aconite	lb.	.35	—	.40
Balmy	lb.	.11	—	.13
Bay, true	lb.	—	—	—
Belladonna	lb.	.95	—	.10
Boneset, leaves and tops	lb.	.17	—	.19
Buchu, short	lb.	2.35	—	2.45
Long	lb.	2.30	—	2.45
Cannabis, true, imported	lb.	3.50	—	3.60
American	lb.	.34	—	.35
Catnip	lb.	.10	—	.12
Chestnut	lb.	.06	—	.07
Chireta	lb.	.39	—	.40
Coca, Huancuco	lb.	—	—	—
*Truxillo	lb.	.54	—	.58
Coltsfoot	lb.	.20	—	.22
*Conium	lb.	—	—	—
Corn Silk	lb.	.11	—	.12
Damiana	lb.	.15	—	.16
Deer Tongue	lb.	.20	—	.21
Digitalis, Domestic	lb.	.35	—	.40
Imported	lb.	.43	—	.44
Eucalyptus	lb.	.09	—	.10
Euphorbia Pilulifera	lb.	.18	—	.19
Grindelia Robusta	lb.	.10½	—	.13
*Henbane, German	lb.	—	—	—
Domestic	lb.	1.25	—	1.30
Henna	lb.</td			

## Drugs &amp; Chemicals, Heavy Chemicals and Dyestuffs in Original Packages

Spearmint American	lb.	.19½	.20½
Squa Vine	lb.	.26	.30
Stramonium	lb.	.18	.19
Tansy	lb.	.10	.11
Thyme, Spanish	lb.	.11	.11½
French	lb.	.14½	.14½
Uva Ursi	lb.	.18	.19
Witch Hazel	lb.	.06½	.08
Wormwood imported	lb.	.14	.17
Yerba Santa	lb.	.08½	.09½

## ROOTS

Aconite, U.S.P.	lb.	.43	.50
Powdered	lb.	.48	.55
German	lb.	—	—
*Powdered	lb.	—	—
*Aikanet	lb.	2.20	2.40
Althea, cut	lb.	.75	.79
Whole	lb.	.33	.35
Angelica American	lb.	.39	.45
Imported	lb.	.59	.69
Arnica	lb.	.80	.95
Arrowroot, American	lb.	.24	.25
Bermuda	lb.	.54	.59
St. Vincent	lb.	.39	.44
Bamboo Brier	lb.	.04	.05
Bearfoot	lb.	.09	.10
Belladonna	lb.	2.45	2.60
Powdered	lb.	2.50	2.70
Berberis, Aquifolium	lb.	.19	.20
Beth.	lb.	.13	.14
Blood	lb.	.49	.55
Blueflag	lb.	.35	.36
Erythronia	lb.	.29	.30
*Burdock, Imported	lb.	.16	.17
American	lb.	.15	.16
Calamus, bleached	lb.	—	1.35
Unbleached, natural	lb.	.16	.17
Cohosh, black	lb.	.10	.11
Blue	lb.	—	10½
Colchicum	lb.	2.70	2.75
Colombo, whole	lb.	.29	.30
Comfrey	lb.	.22	.23
Culver's	lb.	.14	.15
Cranebill see Geranium.	lb.	—	—
Dandelion, English	lb.	.29	.30
American	lb.	.28	.31
Dogglass Dom.	lb.	.39	.45
Cut Bermuda	lb.	.29	.30
Echinacea	lb.	.28	.29
Elecampane	lb.	.08½	.09
Galangal	lb.	.26	.27
Gelsemium	lb.	.08½	.09
Jentian	lb.	.16	.16½
Powdered	lb.	.21	.22
Geranium	lb.	.07	.09
Ginger, Jamaica, unbleached	lb.	.16	.17
Bleached	lb.	.24	.25
*Ginseng, Cultivated	lb.	—	—
Wild, Eastern	lb.	—	—
Northwestern	lb.	—	—
Southern	lb.	—	—
Golden Seal	lb.	5.20	5.25
Powdered	lb.	5.75	5.80
Hellebore, Black	lb.	1.40	1.50
White, Domestic	lb.	.21	.22
Powdered	lb.	.25	.28
*Imported	lb.	—	—
Ipecac, Cartagena	lb.	4.20	4.30
Powdered	lb.	4.30	4.40
Rio	lb.	4.20	4.25
Jalap, whole	lb.	.42	.50
Powdered	lb.	.52	.57
Kava Kava	lb.	.17	.19
Lady Slipper	lb.	.90	.95
Licorice, Russian, cut	lb.	.74	.75
Spanish natural bales	lb.	.30	.31
Selected	lb.	.31	.33
Powdered	lb.	.32	.34
Lovage, American	lb.	.73	.75
Manaca	lb.	.28	.30
Mandrake	lb.	.11	.12
Mask, Russian	lb.	1.65	2.00
Orris, Florentine, bold	lb.	.25	.26
Verona	lb.	.23	.24
Finger	lb.	1.95	2.05
Pereira Brava	lb.	.32	.33
Pellitory	lb.	.28	.30
Pink, true	lb.	.41	.42
Pleurisy	lb.	.18	.19
Poke	lb.	.05	.06
Rhatany	lb.	.14	.15
Rhubarb Shensi	lb.	.82	.90
Chips	lb.	.62	.65
High Dried	lb.	.62	.70
Sarsaparilla, Honduras	lb.	.78	.81
American	lb.	.40	.45
Mexican	lb.	.65	.75
Seneca, Northern	lb.	1.05	1.10
Southern	lb.	1.00	1.05

*Nominal.	lb.	—	—
High Dried	lb.	.62	.70
Sarsaparilla, Honduras	lb.	.78	.81
American	lb.	.40	.45
Mexican	lb.	.65	.75
Seneca, Northern	lb.	1.05	1.10
Southern	lb.	1.00	1.05

## WHERE TO BUY

**H. R. Lathrop & Co., Inc.**  
116 Beekman St. New York

## BOTANICAL DRUGS

**Ibero-American Export Co., INCORPORATED**  
10 Bridge Street, New York

## OFFER

Licorice Root—African Caraway Seed  
Sage Leaves—Rosemary Leaves

Serpentaria	lb.	.46	.47
Skunk Cabbage	lb.	.14	.16
Snake, Black	lb.	.37	.38
Canada natural	lb.	.39	.59
Stripped	lb.	.45	.50
Spikenard	lb.	.29	.30
Squill, white	lb.	.13	.14
Stillingia	lb.	.12½	.13½
Stone	lb.	.09	.10
Turmeric, Aleppy	lb.	.08½	.08½
China	lb.	.10½	.10½
Madras	lb.	.12½	.12½
Unicorn false (helonias)	lb.	.49	.54
True (Aletris)	lb.	.50	.55
Valerian, Belgian	lb.	1.23	1.40
English	lb.	—	—
*German	lb.	—	—
Japanese	lb.	1.40	1.45
Yellow Dock	lb.	.11	.14
Domestic	lb.	—	—
Yellow Parilla	lb.	.11	.12

## SEEDS

*Anise, Levant	lb.	—	—
Spanish	lb.	.26	.26½
Star	lb.	.26	.26½
Canary, Spanish	lb.	—	—
South American	lb.	.19½	.20
Caraway, African	lb.	.62	.63
*Dutch	lb.	—	—
Cardamoms, fair bleached	lb.	.75	.80
Celery	lb.	.50	.51
Colchicum	lb.	3.45	3.70
Coriander, Bombay	lb.	.11	.11½
Mogador, Unbleached	lb.	.10½	.10½
Bleached	lb.	.12	.12½
Cumin, Levant	lb.	.17½	.19
*Malta	lb.	.18½	.19½
Morocco	lb.	.11½	.11½
Dill	lb.	.19	.19
Fennel, French	lb.	.17	.17½
*German, small	lb.	—	—
*Roumanian, small	lb.	—	—
Flax, whole	per bbl.	18.25	18.75
Ground	lb.	.11	.12
Foenegreek	lb.	.10½	.11
Hemp, Manchurian	lb.	.07½	.08½
*Russian	lb.	—	—
Job's Tears, white	lb.	.05½	.06
Larkspur	lb.	.32½	.33
Lobelia	lb.	.29	.30
Mustard, Bari, Brown	lb.	—	—
*Dutch	lb.	—	—
Bombay, Brown	lb.	.17½	.17½
California Trieste, brown	lb.	.24	.25
Chinese	lb.	.11½	.11½
English, yellow	lb.	.28½	.29
Parsley	lb.	.23	.25
Poppy, Dutch	lb.	—	—
Russian blue	lb.	.75	.76
Indian	lb.	.39	.40
Quince	lb.	1.14	1.24
Rape, English	lb.	—	—
Japanese small	lb.	.09½	.10
Domestic	lb.	.10	.10½
Sabadilla	lb.	.13	.14
Stramonium	lb.	.44	.49
*Strophanthus, Hispidus	lb.	1.45	1.50
Kombe	lb.	.189	.199
Sunflower, domestic	lb.	.08½	.08½
South American	lb.	.08	.08½

\*Nominal.

Worm, American	lb.	.08½	.09½
Levant	lb.	.89	.94

## SPICES

Capsicum, African pods	lb.	.20	.21
Japan	lb.	.14½	.15
Cassia, Batavia, No. 1	lb.	.28	.29
China, Selected, mats.	lb.	.24	.25
Saigon, assortment	lb.	.49	.53
Cassia Buds	lb.	.25	.26
Chillies, Japan	lb.	.15½	.16
Mombasa	lb.	.22½	.23
Zanzibar	lb.	.46½	.47
Ginger, African	lb.	.12½	.12½
Cochin "D"	lb.	.18½	.19
Jamaica, white good	lb.	.11½	.12
Japan	lb.	.51	.52
Mace, Banda, No. 2	lb.	.45	.46
Batavia, No. 2	lb.	.45	.46
Nutmegs, 110s	lb.	.36	.37
Pepper, black, Sing.	lb.	.25	.25½
White	lb.	.31	.31½
Pimento	lb.	.10	.10½

## WAXES

Bayberry	lb.	.36	.37
Bees, Yellow, crude	lb.	.43½	.45
Yellow, refined	lb.	.47	.48
White	lb.	.46½	.48
Candelilla	lb.	.44	.45
Carnauba, Flor.	lb.	.93	.94
No. 1	lb.	.90	.91
No. 2	lb.	.85	.86
No. 3	lb.	.76	.77
Ceresin, Yellow	lb.	.17	.18
White	lb.	.26	.27
Montan, crude	lb.	.34	.35
*Bleached	lb.	—	—
Ozokerite, crude, brown	lb.	.35	.36
*Green	lb.	—	—
Refined, white	lb.	—	—
*Domestic	lb.	—	—
Refined, yellow	lb.	—	—
Paraffin, refd 120 deg. m.p.	lb.	.12½	.13
Foreign, 130 deg. m.p.	lb.	.15	.16
Stearic Acid—	lb.	—	—
Single pressed	lb.	.23½	.24
Double pressed	lb.	.24½	.25
Triple pressed	lb.	.26	.26½

## Heavy Chemicals

Acetic acid, 28 p.c.	100 lbs.	4.91	5.16
56 p.c.	100 lbs.	9.32	9.57
*70 p.c.	—	—	—
*80 p.c.	100 lbs.	15.15	15.40
*Glacial Gov. pr.	lb.	.19½	Gov. pr.
Alum, ammonia, lump	lb.	.06	.07
Powdered	lb.	.06½	.08
Ground	lb.	.06½	.07½
Aluminum hydrate light	lb.	.17	.17½
Heavy	lb.	.11	.12½
Arsenic, white	lb.	.09½	.17
Red	lb.	.65	.70
Ammonia, Anhydrous	lb.	.40	.45
Ammonia Water, 26 deg. car.	lb.	.084	.084
20 deg., carboys	lb.	.07	.09
*18 deg., carboys	lb.	—	—
*16 deg., carboys	lb.	.06	.08
Ammonium chloride, U.S.P.	lb.	.19	.21
*Sal Ammoniac, gray	lb.	.22½	.23½
Granulated, white	lb.	.22½	.23
Lump	lb.	1.00	1.10
Sulphate, foreign	100 lbs.	—	—
Domestic	100 lbs.	8.00	8.50
Antimony Salts, 75 p.c.	lb.	—	—
65 p. c.	lb.	—	—
47 p. c.	lb.	—	—
Blanc Fixe, dry	lb.	.05	.05½
Barium, chloride	ton	80.00	90.00
Dioxide	lb.	.26	.27
Nitrate	lb.	.1134	.1234
Barytes, floated, white	ton	31.00	38.00
Off color	ton	14.00	18.00
Bleaching Powder, 35 p.c.	lb.	—	.06

\*Nominal.

## Drugs &amp; Chemicals, Heavy Chemicals and Dyestuffs in Original Packages

*Calcium Acetate, ....	100 lbs.	—	4.00
Carbide	lb.	.18	.20
Carbonate	lb.	—	—
Chloride, solid, f.o.b. N. Y. ton	24.00	—	26.00
Granulated, f.o.b. N. Y. ton	—	34.00	—
Solid, second hands...ton	30.00	—	45.00
Gran. second hands...ton	40.00	—	—
Sulphate, 98-99 p.c. ....	lb.	.05	.05%
Carbon tetrachloride	lb.	.65	—
Copper Carbonate	lb.	.31	.33
Subacetate (Verdigris) ....	lb.	.40	.42
Powdered	lb.	.40	.42
Sulphate, 98-99 p.c. ....	lb.	.084	.09
Second hands	lb.	.084	.09
Powdered	lb.	.10	.10%
Copperas, f.o.b. works...100 lbs.	2.05	—	2.15
Fusel Oil, crude	gal.	2.65	2.75
Refined	gal.	3.75	4.00
Hydrofluoric Ac. 30 p.c. bbls. lb.	—	—	.05
48 p. c. in carboys	lb.	—	.09
52 p. c. in carboys	lb.	—	.10
Lead, Acetate, brown sugar. lb.	154	—	.16%
Broken Cakes	lb.	164	.17
Granulated	lb.	17%	17%
Arsenate, powdered	lb.	.31	.33
Paste	lb.	.15	.17
*Nitrate	lb.	Nominal	.09%
Oxide, Litharge, Amer. pd. lb.	.094	—	.09%
Foreign	lb.	—	—
Red, American	lb.	—	.104
Sulphate, basic	lb.	—	.084
White, Basic Carb., Amer. dry	lb.	—	.094
in Oil, 100 lbs. or over. lb.	—	—	.104
English	lb.	—	—
Lime, hydrate	lb.	Nominal	—
Sulphur solution	gal.	.15	.19%
Magnesite, f.o.b. Cal.	42.00	—	44.00
f. o. b. N. Y.	65.00	—	70.00
Muriatic acid,	—	—	—
*18 deg. carboys	lb.	.024	.024
20 deg. carboys	lb.	.024	.024
22 deg. carboys	lb.	.024	.03%
Nickel oxide	lb.	.60	.70
Salts, single	lb.	.16	.17
double	lb.	.14	.15
Nitric acid, 36 deg. carboys lb.	.054	—	.056%
*38 deg. carboys	lb.	.074	.08
40 deg. carboys	lb.	.074	.08
42 deg. carboys	lb.	.084	.09
Aqua Fortis, 36 deg. carb. lb.	—	—	.054
38 deg. carboys	lb.	—	.054
40 deg. carboys	lb.	—	.06
42 deg. carboys	lb.	—	.064
Phosphorus, red	lb.	.85	—
Yellow	lb.	.75	—
Plaster of Paris	bbi.	1.50	—
True Dental	bbi.	1.75	—
Saltpetre, Granulated	lb.	—	.27%
Refined	lb.	.314	.315
Soda Ash, 58 p.c. in bags 100 lbs.	2.65	—	2.75
In bbls.	100 lbs.	3.35	—
Claustic, 76 p.c. Solid 100 lbs.	4.35	—	4.60
Powd. or gran. 76 p.c.	100 lbs.	—	—
Sodium Bichromate	lb.	5.25	—
Bisulphite	lb.	—	—
Carbonate, Sal. Soda, Am. 100lb.	1.30	—	1.40
Chlorate	lb.	.19	.25
Cyanide	lb.	.32	.35
Hyposulphite, bbls....100 lbs.	2.75	—	3.00
Kegs	100 lbs.	2.40	—
*Nitrate, tech.	100 lbs.	—	4.32%
Refined	lb.	.064	.07
Nitrite	lb.	.26	.27
Prussiate, Yellow	lb.	.41	.45
Silicate, 60 p.c. ....100 lbs.	6.00	—	6.30
40 p.c. ....100 lbs.	2.60	—	2.80
Sod. Sulph, G. b. salt 100 lbs.	2.25	—	3.00
Sulphide 60-62 p.c. cryst.	lb.	.10	.10%
30-32 p.c.	lb.	.08	.08%
*Sulphur (crude) f.o.b. N. Y. ton	—	—	—
f. o. b. Baltimore	ton	—	—
Suphuric Acid	60 deg. f.o.b. wks....ton	18.00	Gov. pr.
66 deg. f.o.b. wks....ton	28.00	Gov. pr.	
Oleum, f.o.b. wks....ton	32.00	Gov. pr.	
Battery Acid car's per 100 lbs.	Nominal	—	—
Zinc, carbonate	lb.	Nominal	—
Chloride	lb.	.154	.16
Oxide	lb.	.134	.18
Sulphate	lb.	.05	.05%
*Nominal.	—	—	—

## WHERE TO BUY

For Prompt Delivery:  
Calcined Carbonate of Potash!  
Prussiate of Potash!

A. KLIPSTEIN & COMPANY  
644-652 Greenwich Street  
New York City

Also:  
Dyestuffs, Gums, Oils, Tanning Materials  
and Other Chemicals

ZINC OXIDE  
Lead Free

Katzenbach & Bullock Co.  
New York Trenton Chicago  
Boston San Francisco

Dyestuffs, Tanning Materials  
and Accessories

## COAL-TAR CRUDES

Benzol, C. P.	gal.	.25	—	.28%
(90 p.c.)	gal.	.264	—	.27%
Cresylic acid, crude, 95-97 p.c. gal.	gal.	1.15	—	1.20
50 p.c.	lb.	.75	—	.85
25 p.c.	lb.	.40	—	.45
Cresol, U.S.P.	lb.	.21	—	.22
Cresotol, oil, 25 p.c.	gal.	.38	—	.45
Dip. oil, 20 p.c.	gal.	.40	—	.50
Naphthalene, balls	lb.	.104	—	.10%
Flake	lb.	.084	—	.084
Phenol	lb.	.43	—	.47
Pitch, various grades	ton	10.00	—	.20
Solvent naphtha, waterwhitegal.	ton	.20	—	.24
Crude heavy	gal.	.14	—	.17%
*Toluol, pure	gal.	1.50	—	.155
*Commercial, 90 p.c.	gal.	1.50	—	.155
Xylool, pure water white	gal.	.45	—	.55

## INTERMEDIATES

Acid Benzoic	lb.	2.80	—	2.90
*Acid Benzoic Crude	lb.	Nominal	—	—
Acid H	lb.	3.25	—	3.50
Acid Metanilic	lb.	—	—	—
Acid Naphthionic, Crude	lb.	1.00	—	1.10
Refined	lb.	1.20	—	1.30
Acid Sulphanilic, crude	lb.	.31	—	.33
Refined	lb.	.42	—	.44
p-Aminophenol Base	lb.	4.25	—	4.50
p-Aminophenol Hydrochloride	lb.	4.25	—	4.50
*Aminobenzoic	lb.	—	—	—
Aniline Oil, drums extra	lb.	.284	—	.304
Aniline Salts	lb.	.43	—	.45
Aniline for red	lb.	1.15	—	1.20
*Anthracene (80 p.c.)	lb.	.85	—	.90
Anthraquinone	lb.	—	—	.80
Benzaldehyde	lb.	3.50	—	4.00
Benzidine Base	lb.	1.75	—	1.85
Benzidine Sulphate	lb.	1.40	—	1.45
Benzote of Soda	lb.	2.80	—	2.90
Benzylchloride	lb.	2.60	—	2.70
Diamidophenol	lb.	6.50	—	7.00
p-Dianisidine	lb.	—	—	—
Dinitrophenol	lb.	.52	—	.60
p-Dichlorbenzol	lb.	.15	—	.16
Diethylaniline	lb.	.15	—	.18
Dinitrobenzol	lb.	.35	—	.37
m-Dinitrobenzene	lb.	.45	—	.50
Dinitrochlorbenzene	lb.	.50	—	.56
Dinitrochlorbenzol	lb.	.404	—	.404
Dinitrophenol	lb.	.55	—	.65
Dinitrotoluol	lb.	.60	—	.62
Diphenylamine	lb.	1.05	—	1.15
Dioxynaphthalene	lb.	—	—	—
"G" Salt	lb.	.85	—	.95
*Nominal	—	—	—	—

Hydrazobenzene	lb.	1.50	—	2.00
Induline	lb.	2.00	—	2.75
Methylanthraquinone	lb.	—	—	—
Monodinitrochlorbenzol	lb.	.48	—	—
Monooethylaniline	lb.	1.00	—	1.25
Naphthalenediamine	lb.	1.50	—	1.60
a-Naphthol	lb.	.65	—	.70
b-Naphthol, Technical	lb.	.85	—	.90
Sublimed	lb.	.61	—	.65
a-Naphthylamine	lb.	1.65	—	1.75
b-Naphthylamine	lb.	1.65	—	1.75
p-Nitranilin	lb.	1.85	—	1.95
Nitrobenzene	lb.	.20	—	.22
o-Nitrochlorbenzol	lb.	.50	—	.55
Nitronaphthalene	lb.	.44	—	.45
p-Nitrophenol	lb.	1.60	—	1.70
p-Nitrotoluol	lb.	1.55	—	1.65
Nitrotoluol	lb.	.55	—	.60
o-Nitrotoluol	lb.	.75	—	.80
m-Phenylenediamine	lb.	3.00	—	.340
Phthalic Anhydride	lb.	4.25	—	.475
Pseudo-Cumol	lb.	—	—	—
Resorcin, crystals, U.S.P.	lb.	7.50	—	.850
Resorcin, Technical	lb.	4.50	—	.600
Tetranitromethylaniline	lb.	—	—	.250
Tolidin	lb.	2.55	—	.300
o-Toluidine	lb.	1.00	—	.130
p-Toluidine	lb.	2.05	—	.235
m-Toluylenediamine	lb.	2.50	—	.275
Xylene, pure	gal.	1.00	—	.125
Xylene, Com.	gal.	.40	—	.45
COAL-TAR COLORS	lb.	—	—	—
Acid Black	lb.	1.50	—	.200
Acid Blue	lb.	3.50	—	.550
Acid Brown	lb.	2.00	—	.500
Acid Fuchsin	lb.	7.00	—	10.00
Acid Orange II	lb.	.60	—	.60
Acid Orange III	lb.	1.00	—	.135
Acid Red	lb.	1.75	—	.225
Acid Scarlet	lb.	1.50	—	.230
Acid Violet 10 B	lb.	8.00	—	10.00
Alpine Yellow	lb.	4.25	—	.475
Alizarin Blue, bright	lb.	7.75	—	.925
Alizarin Blue, medium	lb.	6.25	—	.750
Alizarin Brown, conc.	lb.	7.50	—	.850
Alizarin Orange	lb.	8.25	—	.900
Alizarin Red, W. S. Paste	lb.	10.00	—	.11.50
Alkali Blue, Domestic	lb.	9.00	—	.12.00
Benzal Blue, Imported	lb.	14.00	—	.15.00
Alpine Red	lb.	6.00	—	.700
Azo Carmine	lb.	5.50	—	.650
Azo Yellow, green shade	lb.	3.50	—	.350
Auramine, Single O, Dom.	lb.	4.75	—	.525
Auramine, Double O, Imp.	lb.	—	—	—
Benzol Purp. 10 B	lb.	6.50	—	.675
Benzol Purp. 4 B	lb.	3.50	—	.550
Bismarck Brown Y	lb.	.90	—	.12.00
Bismarck Brown R	lb.	1.25	—	.13.00
Chrome Black, Dom.	lb.	1.75	—	.200
Chrome Black, Imp.	lb.	3.30	—	.400
Chrome Blue	lb.	2.50	—	.375
Chrome Green, Dom.	lb.	2.50	—	.275
Chrome Red	lb.	2.55	—	.280
Chrysoidine R	lb.	1.75	—	.200
Chrysoidine Y	lb.	1.15	—	.125
Chrysophenine, Domestic	lb.	6.75	—	.800
Chrysophenine, Imported	lb.	11.00	—	.12.50
Congo Red 4B Type	lb.	1.60	—	.225
Crystal Violet	lb.	6.50	—	.750
Diamine Sky Blue F. F.	lb.	9.25	—	.13.00
Direct Black	lb.	1.10	—	.145
Direct Blue	lb.	2.00	—	.350
Direct Sky Blue	lb.	4.00	—	.600
Direct Brown	lb.	2.50	—	.300
Direct Bordeaux	lb.	2.85	—	.345
Direct Fast Red	lb.	3.50	—	.600
Direct Yellow	lb.	3.00	—	.400
Direct Fast Yellow	lb.	2.90	—	.385
Direct Violet	lb.	3.25	—	.675
Emerald Green Crystals	lb.	18.50	—	.20.00
Erythrosin	lb.	12.00	—	.12.50
Fast Light Yellow, 2-G.	lb.	3.25	—	.400
Fast Red, 6R extra, can't.	lb.	4.60	—	.500
Fur Black, extra	lb.	2.75	—	.375
Fuchsine Crystals, Dom.	lb.	7.75	—	.900
Fuchsine Crystals, Imp.	lb.	12.00	—	.12.50
Geranine	lb.	8.75	—	.925
*Green Crystals, Brilliant	lb.	12.00	—	.13.00
Indigo 20 p.c. paste	lb.	1.75	—	.200
Indigotine, conc.	lb.	4.25	—	.500
Indigotine, paste	lb.	1.50	—	.250
Induline Base	lb.	1.75	—	.250
Magenta Acid, Domestic	lb.	4.25	—	.500
Magenta Crystals, Imported	lb.	11.00	—	.12.00
Malachite Green, Crystals	lb.	8.00	—	.12.00
Malachite Green, Powdered	lb.	7.00	—	.825
Metanil Yellow	lb.	2.35	—	.275
*Nominal	—	—	—	—

## Drugs &amp; Chemicals, Heavy Chemicals and Dyestuffs in Original Packages

Medium Green	lb. 5.00	6.00
Methylene Blue, tech.	lb. 4.00	4.50
Methyl Violet	lb. 4.00	4.50
Naphthol Green	lb. 3.25	3.75
Nigrosine, Oil Sol.	lb. .85	1.00
Nigrosine, spts. sol.	lb. .78	.88
Nigrosine water sol., blue	lb. .83	.93
Jet	lb. .90	1.00
*Naphthylamine Red	lb. 6.75	7.50
Oil Black	lb. .85	1.20
Oil Orange	lb. 2.00	2.50
Oil Scarlet	lb. 2.00	2.50
Oil Yellow	lb. 1.88	2.50
Orange, R. G., contract	lb. 2.00	2.25
Orange Y., conc.	lb. 1.00	1.25
Osmanine, Violet	lb. 6.50	7.00
Patent Blue, Swiss Type	lb. 20.00	23.00
Phosphine G. Domestic	lb. 6.50	7.00
Poncau	lb. 1.80	2.50
Prinoline, Dom.	lb. 5.50	6.50
Rhodamine B, ex. cont.	lb. 80.00	85.00
Scarlet 2R	lb. 1.50	2.00
Sulphur Blue, Dom.	lb. 2.50	3.00
Sulphur Blue, Imp.	lb. 12.00	13.00
Sulphur Black	lb. .40	.65
Sulphur Black E.S. standard	lb. .90	1.00
Sulphur Black 100 p.c.	lb. 1.10	1.75
Sulphur Black, 150 p.c.	lb. 1.50	2.15
Sulphur Blue-Black	lb. 3.10	3.65
Sulphur Brown	lb. .35	.60
Sulphur Green	lb. 1.75	2.50
Sulphur, Navy Blue	lb. 1.40	1.75
Sulphur, Yellow	lb. 1.10	1.55
Tartrazine, Domestic	lb. 1.70	1.80
Tartrazine, Imported	lb. 1.25	1.40
Uranine, Domestic	lb. 10.00	11.00
Wool Green S. Swiss	lb. 8.00	8.50
Valonia, solid, 65 p.c. tan	lb. 5.00	6.00
Victoria Blue, base, Dom.	lb. 10.00	17.00
Victoria Green	lb. 5.00	8.00
Victoria Red	lb. 7.00	8.00
Victoria Yellow	lb. 6.50	8.00
Yellow for wool	lb. 1.50	2.25

## NATURAL DYESTUFFS

Anatto, fine	lb. .33	.34
Seed	lb. .12	.124
Carmine No. 40	lb. 4.25	4.75
*Cochineal	lb. —	—
Gambier, see tanning.	lb. —	—
Indigo, Bengal	lb. 3.00	3.50
Oudes	lb. 2.25	2.75
Guatemala	lb. 2.25	2.75
Kurpahs	lb. 2.25	2.75
Madras	lb. .90	1.00
Madder, Dutch	lb. 26.5%	29%
Nutgalls, blue Aleppo	lb. —	—
Chinese	lb. 33.5%	34%
Persian Berries	lb. —	—
Quercitron Bark, see tanning.	lb. —	—
Sumac, see tanning.	lb. —	—
China	lb. .09	.10%
Turmeric, Madras	lb. .12	.12%
*Alepppey	lb. —	—
Pubna	lb. 10%	.11%

## DYEWOODS

Barwood	lb. —	—
Camwood, chips	lb. .17	.20
Fustic, sticks	ton 55.00	60.00
Chips	lb. .034%	.05%
Hypernic, chips	lb. .08	.10
Logwood, Sticks	ton 50.00	55.00
Chips	lb. .034%	.05%
Quercitron, see tanning.	lb. —	—
Red Saunders, chips	lb. .15	.17

## EXTRACTS

Archil, Double	lb. .15%	.17%
Triple	lb. .16	.20
Concentrated	lb. .22	.29
Cutch, Mangrove, see tanning.	lb. —	—
Rangoon, boxes	lb. Nominal	—
Liquid	lb. Nominal	—
Tablet	lb. Nominal	—
Cudbear, French	lb. —	—
*English	lb. —	—
*Concentrated	lb. —	—
Flavine	lb. 1.00	1.50
Fustic, Solid	lb. .27	.28
Liquid, 51 deg.	lb. .13%	.15
Gall	lb. .29	.30
Hematin Extract	lb. .13	.14
Crystals	lb. .21	.23
Hypernic, liquid	lb. .30	.32
Indigo, natural for cotton	lb. .50	.54
For wool	lb. .30	.32
Indigo, 100 p.c. pure	lb. —	.550
Logwood, solid	lb. .21	.22
Crystals	lb. .21	.26
51 deg. Twaddle	lb. 12.5%	13.5%
Contract	lb. 10%	.10%

\*Nominal.

## WHERE TO BUY

E. F. DREW & CO., Inc.  
50 BROAD ST. NEW YORKAniline Dyestuffs  
Dyewood Extracts  
Industrial Oils  
Chemicals

## Osage Orange—

Powdered ..... lb. — — .25

Paste ..... lb. .06 — .12

Persian Berries ..... lb. — — —

Quebracho, see tanning.

Quercitron, 51 deg. lia. .... lb. .07 — .074

Sumac, see tanning.

## MISCELLANEOUS DYESTUFFS

## RAW TANNING MATERIALS

Albumen, Egg ..... lb. 1.25 — 1.35

Blood, imported ..... lb. .85 — .95

Domestic ..... lb. .65 — .70

Prussian Blue ..... lb. .80 — .90

Soluclay ..... lb. .95 — 1.00

Turkey Red Oil ..... lb. .13 — .18

Zinc Dust, prime heavy ..... lb. 14% — .16

## TANNING MATERIALS

Algarobilla ..... ton 40.00 ..... 150.00

Divi Divi ..... ton 75.00 ..... 85.00

Hemlock Bark ..... ton 15.00 ..... 16.00

Mangrove, African, 38 p.c. Bark, S. A. .... ton 60.00 ..... 62.00

Myrobalan ..... ton 45.00 ..... 50.00

Oak Bark ..... ton 15.00 ..... 16.00

Ground ..... ton — ..... 17.50

Quercitron Bark rough ..... ton 13.00 ..... 15.00

Ground ..... ton 27.00 ..... 29.00

Sumac, Sicily, 27 p.c. tan. .... ton 94.00 ..... 100.00

Virginia, 25 p.c. tan. .... ton 63.00 ..... 73.00

Valonia Cups ..... ton — — —

Beard ..... ton — — —

Wattle Bark ..... ton 62.00 ..... 64.00

## TANNING EXTRACTS

Cheastnut, ordinary, 25 p.c. tan. bbls. .... lb. .024 — .03

Clarified, 25 p.c. tan, bbls. .... lb. .03 — .04

Crystals, ordinary ..... lb. — — —

Clarified ..... lb. — — —

Gambier, 25 p.c. tan. .... lb. .16% — .17

Common ..... lb. .24% — .25%

Cubes, Singapore ..... lb. .28 — .30

Cubes, Java ..... lb. .19 — .19%

Hemlock, 25 p.c. tan. .... lb. .03% — .04%

Crystals, 50 p.c. tan. .... lb. .07% — .08%

Liquid, 25 p.c. tan ..... lb. .08 — .12

Muskgon, 23-30 p.c. tan, 50 p.c. total solids ..... lb. .014 — .024

Myrobalans, liq., 23-25 p.c. tan. bbl. .... Nominal

Solid, 50 p.c. tan. .... lb. Nominal

Jak Bark, liquid, 23-25 p.c. tan. .... lb. .04% — .05

Quebracho, liquid, 35 p.c. .... lb. — — —

\*35 p.c. tan, untreated ..... lb. — — —

\*35 p.c. tan, bleaching ..... lb. — — —

\*Solid, 65 p.c. tan, ordinary lb. — — —

\*Clarified ..... lb. — — —

Spruce, liquid, 20 p.c. tan. .... lb. .01 — .014

Sumac, liquid, 25 p.c. tan. .... lb. .07 — .104

Valonia, solid, 65 p.c. tan. .... lb. Nominal

## Oils

ANIMAL AND FISH  
(Carloads)

Cod Newfoundland ..... gal. — — 1.45

Domestic, prime ..... gal. — — 1.39

Liver, Newfoundland ..... bbl. 89.00 — 90.00

Norwegian ..... bbl. 135.00 — 150.00

Degas, American ..... lb. — — .22

\*English ..... lb. — — —

German ..... lb. — — —

Neutral ..... lb. — — —

Horse ..... lb. — — .16%

No. 2 ..... gal. 1.38 — 1.47

Lard, prime winter ..... gal. 2.24 — 2.25

Off prime ..... gal. 1.71 — 1.73

Extra, No. 1 ..... gal. 1.64 — 1.66

No. 1 ..... gal. 1.49 — 1.51

No. 2 ..... gal. 1.44 — 1.46

Menhaden, Light strained ..... gal. — — 1.42

Yellow, bleached ..... gal. — — 1.43

White, bleached, winter. .... lb. 1.46 — 1.47

Northern, crude ..... gal. — — 1.15

Cudbear, French ..... gal. — — 1.20

\*Nominal.

Neatsfoot, 20 deg. .... gal. — — 3.19

30 deg., cold test ..... gal. 2.99 — 3.02

40 deg., cold test ..... gal. — — 2.49

Dark ..... gal. 1.49 — 1.51

Prime ..... gal. — — 1.69

Oleo Oil ..... gal. .23 — .24

\*Porpoise, body ..... gal. — — —

Jaw ..... gal. 20.00 — 22.00

Red (Crude Oleic Acid) ..... lb. .16% — .174

Saponified ..... lb. .174 — .175

\*Sod Oil ..... gal. — — —

\*Sperm bleached winter ..... gal. — — —

38 deg., cold test ..... gal. 2.22 — 2.23

45 deg., cold test ..... gal. 2.17 — 2.18

Natural winter, 38 deg., cold ..... gal. — — —

test ..... gal. — — —

Stearic, single pressed ..... lb. .31 — .32

Double pressed ..... lb. .29% — .30

\*Triple pressed ..... lb. .24% — .25%

Tallow, acidless ..... gal. 1.57 — 1.59

\*Prime ..... gal. 1.52 — 1.53

Whale, natural winter ..... gal. 1.49 — 1.50

Bleached, winter ..... gal. 1.52 — 1.53

## VEGETABLE OILS

Castor, No. 1 bbls. .... lb. .30 — .31

Cases ..... lb. .31 — .32

No. 3 ..... lb. .29% — .30

Cocoanut, Ceylon, bbl. .... lb. — — .17%

\*Ceylon, tanks ..... lb. — — .16%

Cochin, bbls. .... lb. — — .19

Tanks ..... lb. — — .18%

Corn, refined, bbls. .... lb. 21.47 — 21.67

\*Crude, bbls. .... lb. .18 — .18%

\*Cottonseed, Crude, f. o. b. .... lb. — — .174

mills, in tanks ..... lb. — — —

\*Summer, yellow, prime ..... lb. .21 — .21%

\*White ..... lb. — — —

\*Winter yellow ..... lb. — — —

Linseed, raw car lots ..... gal. — — .88

5 barrel lots ..... gal. — — .90

Boiled, 5-bbl. lots ..... gal. — — .92

Double Boiled, 5-bbl. lots ..... gal. — — .94

gal. — — .94

\*Olive, denatured ..... gal. 4.25 — 4.50

\*Frogs ..... lb. .42 — .44

Palm, Lagos casks ..... lb. — — —

Benin ..... lb. — — —

Niger ..... lb. .45 — .50

\*Palm Kernel, domestic ..... lb. — — —

\*Imported ..... lb. — — —

Peach Kernel ..... lb. — — —

Peanut Oil, edible ..... lb. .21 — .22

\*Crude f.o.b. mills ..... gal. — — .136

Pine Oil, white steam ..... gal. .57 — .58

Yellow, steam ..... gal. .56 — .57

\*Poppy Seed ..... gal. — — .590

Rapeseed, refd. bblle. .... gal. — — —

\*Blown ..... gal. — — .190

\*Rosin oil, first rect. .... gal. — — .73

Second ..... gal. — — .76

\*Sesame, domestic ..... gal. — — —

\*Imported ..... gal. — — —

Soya Bean, Manchurian ..... lb. .18% — .18%

\*Tar Oil, gen. dist. .... lb. — — .35

Commercial ..... lb. — — —

## MINERAL

Black, reduced, 29 gravity ..... gal. 24 — .25

29 gravity, 15 cold test ..... gal. 24 — .25

Summer ..... gal. 24 — .25

\*Cylinder, light, filtered ..... gal. 45 — .50

Dark, filtered ..... gal. 39 — .43

Extra cold test ..... gal. 65 — .75

Dark steam, refined ..... gal. 28 — .32

Neutral, white, 29 grav. .... gal. — — .51

Neutral, filtered, lemon, 33/34 gravity ..... gal. — — .36

White 30/31 gravity ..... gal. .50 — .57

Paraffin, high viscosity ..... gal. .40 — .41

903 sp. gr. ..... gal. .34 — .36

Red Paraffin ..... gal. .30 — .38

No. 200 ..... gal. .38 — .40

No. 100 ..... gal. .36 — .38

No. 110 ..... gal. .32 — .33

## Miscellaneous

NAVAL STORES  
(Carloads ex-dock)

\*Spirits Turpentine in bbls. .... gal. .64% — .65

\*Wood Turpentine, steam distilled, bbls. .... lb. .59% — .61%

\*Turpentine, Destructive distilled, bbls. .... lb. .44% — .56%

\*Pitch, prime ..... 200-lb. bbl. 7.25 — 7.30

Rosin, com., to g'd. .... 80 bbl. 14.25 — 14.30

\*Tar, kiln-burnt, pure 50-gal. .... bbls. 12.50 — 12.55

\*Nominal.

## Drugs &amp; Chemicals, Heavy Chemicals and Dyestuffs in Original Packages

SHELLAC			
D. C.	lb.	.86	.87
*Diamond 'I'	lb.	—	—
V. S. O.	lb.	.86	.87
Fine Orange	lb.	.75	.80
Second Orange	lb.	.72	.73
T. N.	lb.	.68	.69
*A. C. Garnet	lb.	.68	.69
Button	lb.	.80	.81
Regular, bleached	lb.	.69	.70
Bone, dry	lb.	.79	.80

OIL CAKE AND MEAL			
Cottonseed Cake, f.o.b. Texas..	—	—	51.00
f. o. b. New Orleans	—	—	—
Cottonseed, Meal, f.o.b. Atlanta	—	—	53.00
Columbia	—	—	53.00
New Orleans	ton	—	—
Corn Cake	short ton	55.00	57.00
Meal	short ton	59.00	61.00
Linseed cake, dom.	short ton	—	52.00
Linseed Meal	short ton	52.00	53.00

COCOA			
Bahia	lb.	.12 $\frac{1}{4}$	.12 $\frac{1}{4}$
Caracas	lb.	.13	.13 $\frac{1}{2}$
Hayti	lb.	.11	.11 $\frac{1}{2}$
Maracaibo	lb.	.24	.28
Trinidad	lb.	.13 $\frac{1}{2}$	.13 $\frac{1}{2}$

DEXTRINES AND STARCHES			
*British Gum, Globe, per 100 lbs.	—	—	—
Dextrine, Corn, white or yellow	lb.	.08	.08 $\frac{1}{2}$
Potato, white or canary	lb.	.19 $\frac{1}{2}$	.20 $\frac{1}{2}$
Starch Corn, bags & bbls.	4.25	—	4.60
Pearl, Globe, bags & bbls.	4.07	—	4.40
Potato, Domestic	lb.	.12	.12 $\frac{1}{2}$
*Imported, duty paid	lb.	.12	.12 $\frac{1}{2}$

REFINED SUGAR			
(Prices in Barrels)			
Ar. Fed. War Amer. Nat. Bureau	lb.	—	—
Powdered	9.15	9.15	9.15
XXXX	9.20	9.20	9.20
Confectioners A	8.90	8.90	8.90
Standard Gran.	9.05	9.05	9.05
*Nominal.	—	—	—

Prices fixed by Government.

WHERE TO BUY

**Chas. Morningstar & Co., Inc.**  
WOOLWORTH BLDG. - BARCLAY-6005-6

**STARCHES**  
**DEXTRINES**  
**ALBUMEN**  
**GLUCOSE**

## Soap Makers' Materials

## ANIMAL AND FISH OILS

(Carlots)

Menhaden, crude, f.o.b. mills, ga.	1.14	—	1.19
Light, strained	—	—	1.42
Yellow, bleached	—	—	1.43
White, bleached, winter	—	—	1.46
Neatsfoot, 20 deg.	—	3.19	—
30 deg., cold test	—	—	2.69
40 deg., cold test	—	—	2.49
Dark	—	1.49	—
Prime	—	—	1.69
Red, (Crude oleic acid)	lb.	.16 $\frac{1}{2}$	.17
Saponified	lb.	.17	.17 $\frac{1}{2}$
Stearic, single pressed	lb.	—	.22 $\frac{1}{2}$
Double pressed	lb.	—	.23 $\frac{1}{2}$

## VEGETABLE OILS

Castor, No. 1, bbls.	lb.	.30	.31
No. 3	lb.	.29 $\frac{1}{2}$	.30
Cocconut, Ceylon, bbls.	lb.	—	.17 $\frac{1}{2}$
*Ceylon, Tanks	lb.	—	.16 $\frac{1}{2}$
Cochin, bbls.	lb.	—	.19
Tanks	lb.	—	.18 $\frac{1}{2}$
Corn, crude, bbls.	lb.	.18	.18 $\frac{1}{2}$
Refined, barrels	lb.	21.47	21.67

\*Nominal.

*Cottonseed, crude, f.o.b. mills in tanks	lb.	—	—	17 $\frac{1}{2}$
Summer, yellow, prime	lb.	—	—	21
*White	gal.	—	—	—
*Winter, Yellow	gal.	—	—	—
inseed, raw car lots	gal.	—	—	1.88
5-bbl. lots	gal.	—	—	1.90
Olive, denatured	gal.	—	—	4.25
Foots	lb.	—	—	4.43
Palm Lags, casks	lb.	—	—	—
Niger	lb.	—	—	45
Palm Kernel, domestic	lb.	19	—	19 $\frac{1}{2}$
Peanut, edible	lb.	21	—	21 $\frac{1}{2}$
†Crude, f.o.b. mills	gal.	—	—	1.36
Pine, white steam	gal.	57	—	58
Sesame, domestic	gal.	—	—	3.00
*Soya Bean, Manchurian	lb.	18 $\frac{1}{2}$	—	18 $\frac{1}{2}$

## GREASES, LARDS, TALLOWS

(New York Markets)

Grease, white	lb.	.19 $\frac{1}{2}$	.19 $\frac{1}{2}$
Yellow	lb.	.17 $\frac{1}{2}$	.17 $\frac{1}{2}$
House	lb.	.16 $\frac{1}{2}$	.17
Brown	lb.	.16	.16 $\frac{1}{2}$
Lard, City	lb.	.27	.27
Compound	lb.	.22 $\frac{1}{2}$	.23 $\frac{1}{2}$
Stearine, lard	lb.	.29	.29 $\frac{1}{2}$
Oleo	lb.	.22 $\frac{1}{2}$	.23
Tallow, edible	lb.	.20 $\frac{1}{2}$	.21 $\frac{1}{2}$
City, prime	lb.	.18 $\frac{1}{2}$	.19 $\frac{1}{2}$
Choice Country	lb.	.19	.19 $\frac{1}{2}$

(Western Markets)

Tallow, edible	lb.	.20 $\frac{1}{2}$	.20 $\frac{1}{2}$
City Fancy	lb.	.20	.20
Prime Packers	lb.	.19 $\frac{1}{2}$	.20
Grease, Choice White	lb.	.20	.20 $\frac{1}{2}$
"A" White	lb.	.19 $\frac{1}{2}$	.19 $\frac{1}{2}$
"B" White	lb.	.17	.17 $\frac{1}{2}$
Yellow	lb.	.16	.16 $\frac{1}{2}$
Brown	lb.	.14	.15
Bone	lb.	.11 $\frac{1}{2}$	.12
House	lb.	.15 $\frac{1}{2}$	.15 $\frac{1}{2}$
Stearine, prime oleo.	lb.	.22 $\frac{1}{2}$	.22 $\frac{1}{2}$
Lard, city steam	lb.	—	.27

\*Nominal.

†Buyers' Tanks.

## LIGGETT BUYS WASHINGTON STORES

Takes Over O'Donnell Business—Rexall Agency for City Goes with Deal

The two drug stores operated in Washington, D. C., by James O'Donnell, one of which has the distinction of doing the largest volume of business of any store with the same floor space in the United States, have been sold to the Louis K. Liggett Company, who already have one store there.

The sale includes the complete stock and equipment of both stores, and good will, and Mr. O'Donnell is to refrain from entering into the drug or any similar business in Washington for a period of at least ten years. Under the contract, Mr. O'Donnell also transfers to the new owners all the rights under the Rexall Agency, which he held in the city. The contract was signed on behalf of the Liggett company by George E. Gales, president, who was in Washington for several days negotiating the deal.

Mr. O'Donnell, starting with a small capital and with a business of less than \$10,000 a year, built up a business aggregating more than \$1,000,000 a year, as many as 9,000 individuals having patronized the main store in one day.

The Northern Alkali and Chemical Company has recently been granted a charter and its chief works are to be located in Huntington, W. Va. R. D. Lamie of the Lamie Chemical Company of Huntington is one of the incorporators in the new concern, which is capitalized to the extent of \$60,000. Other incorporators of the company are John Garvin of Ontonagon, Mich.; A. T. Roberts, Theodore Schneider and L. E. Garvin of Marquette, Mich.

## PLANNING HUGE BRITISH DYE PLANT

Levinstein, Ltd., of Manchester, England, and British Dyes, Ltd., Huddersfield, have obtained options on land at Ellesmere Port on the River Mersey, where they will build the largest plant in Great Britain for the manufacture of dyestuffs. One option must be exercised within the next four months and the other within the space of five years. Should they make both acquisitions they will have possession of a strip of land about two miles in length and half a mile in breadth, or an area materially larger than that of the British Dyes' new works at Huddersfield, and ten times the size of the Levinstein Works at Manchester.

## THE BUSINESS SITUATION

Pierre Jay, chairman of the Board, Federal Reserve Bank of New York, says in his report on the business situation in September:

"The market for drugs and chemicals is comparatively quiet outside of Government demand, with prices so firm as to be in some cases nominal."

Many of the drugs and medicines used by the Army Medical Corps are being tested by the bureau of chemistry of the Department of Agriculture, both at headquarters in Washington and at its offices in various cities. Several chemists have gone from the bureau to accept commissions in the Army and perform the work directly for the War Department. Chemists and inspectors are being instructed for Army and Navy work, and special investigations are being conducted on problems concerning foods, leather fabrics, paper, and other products in military and naval demand, as well as drugs and chemicals.

## Imports and Exports of Drugs and Chemicals, Dyestuffs, Etc.

Imports from September 21 to September 28—Exports for month of July

Owing to the strict regulations of the Treasury Department forbidding the publication of the names of importers receiving consignments and the names of ports of shipment, this feature of the service is omitted by DRUG AND CHEMICAL MARKETS during the period of the war. Subscribers interested in any special product will be assisted in locating supplies if they will communicate with the Editor.

### Imports

BAY RUM—  
2,500 gallons  
CAMPHOR—  
123,000 pounds  
500 pounds  
COPRA—  
45,000 pounds  
96,000 pounds  
51,000 pounds  
CUTTLEFISH BONE—  
3,000 pounds  
400 pounds  
GUMS—  
13,500 pounds arabic  
15,200 pounds aloes  
18,300 pounds aloes  
LEAVES—  
25,500 pounds senna  
81,800 pounds coca  
12,750 pounds buchu  
3,500 pounds belladonna  
LEECHES—  
300 pounds blood suckers  
MERCURY—  
5,000 pounds

NUX VOMICA—  
166,000 pounds  
22,400 pounds  
250,000 pounds  
192,500 pounds  
192,400 pounds  
250,000 pounds  
167,030 pounds  
OILS—  
39,900 pounds citronella  
37,800 pounds citronella  
20,400 pounds lemon  
17,750 pounds lemon grass  
6,800 pounds lemon grass  
1,445 pounds lemon grass  
PEEL—  
210 pounds lemon  
400 pounds lemon  
1,080 pounds orange  
ROOT—  
3,000 pounds sarsaparilla  
800 pounds jalap  
15,000 pounds turmeric  
SANDAL WOOD—  
24,150 pounds  
SEEDS—  
1,450 pounds quince  
13,000 pounds poppy  
SPICES—  
45,000 pounds cinnamon

11,200 pounds nutmegs  
395,000 pounds pepper  
185,000 pounds pepper  
132,000 pounds pepper  
96,000 pounds pepper  
133,000 pounds pepper  
382,000 pounds pepper  
TARTAR, CRUDE—  
228,500 pounds

### Exports

ALCOHOL, WOOD—  
10 gallons, Bolivia  
51 gallons, Chile  
BENZOL—  
376 pounds, New Zealand  
BEES WAX—  
135 pounds, Peru  
CALCIUM CARBIDE—  
12,000 pounds, Honduras  
2,000 pounds, Colombia  
COPPER SULPHATE—  
5,200 pounds, Peru  
1,000 pounds, Salvador  
3,400 pounds, Ecuador  
CORN STARCH—  
80 pounds, Chile  
880 pounds, British Guiana  
FLAX SEED—  
11 bushels, Mexico  
4 bushels, San Domingo  
GLYCERIN—  
300 pounds, Mexico  
255 pounds, Colombia  
50 pounds, Newfoundland  
376 pounds, Chile  
180 pounds, Bolivia.

HONEY—  
20 pounds, Bermuda  
LIME CHLORIDE—  
320 pounds, Panama  
5,372 pounds, Mexico  
PARAFFIN WAX, REFINED—  
44,800 pounds, Spain  
115,600 pounds, Cuba  
316,387 pounds, Peru  
26,129 pounds, Costa Rica  
4,400 pounds, Cuba  
515,080 pounds, Chile  
PEPPERMINT OIL—  
33 pounds, Chile  
POTASSIUM CHLORATE—  
42,480 pounds, Cuba  
SODA, ASH—  
613,889 pounds, Cuba  
29,000 pounds, Peru  
SODA, CAUSTIC—  
39,695 pounds, San Domingo  
4,500 pounds, French West Indies  
160 pounds, Hayti  
47,170 pounds, Peru  
625 pounds, Venezuela  
SODA, SAL—  
104,200 pounds, Argentina  
625 pounds, Barbados  
750 pounds, San Domingo  
SODIUM, SILICATE—  
32,500 pounds, San Domingo  
SULPHUR, CRUDE—  
3 tons, Peru  
70 tons, Argentina  
ZINC, OXIDE—  
8,650 pounds, Venezuela  
245 pounds, Peru  
500 pounds, Colombia  
600 pounds, Mexico

### LABOR CONDITIONS IN AUGUST

It is usual that the returns of manufacturing activity in August show fewer employees than in the preceding month. The reports for August of this year confirm this tendency as the number of workers has fallen off two per cent since July. With the exception of the chemical industries, where employees increased slightly, every group had a smaller number of operatives. Losses ranged from four per cent in the stone, clay and glass and in the clothing groups to a fractional loss in light and power.

The decline in the number of workers did not prevent the upward trend of wages from attaining a new high level. The total payroll for August is the largest of which there is record and this high mark has been reached despite wage declines in six of the eleven industry groups. It is the sustaining influence of the metal industries, where total payrolls advanced three per cent, that is responsible for this favorable result. The above facts are based on an analysis of returns received by the Bureau of Statistics and Information of the New York State Industrial Commission.

Since March, 1918, each month has seen the establishment of a new record for average weekly earnings per employee. This figure for August, was \$21.23 and is an advance of \$0.45 over the previous record of July. The corresponding averages as reported in August, 1917, 1916, 1915 and 1914, were, respectively, \$16.44, \$14.44, \$12.89 and \$12.53.

The chemicals, oils and paint group show a slight increase in employees over July but a one per cent decline in aggregate wages. In August, 1918, the group had four per cent more workers and a twenty-five per cent larger payroll than in August, 1917.

### "MADE IN U. S. A." ON ALL EXPORTS

The Merchants Association has adopted the following resolution, urging the use of a distinctive mark to be placed on merchandise exported from this country for consumption abroad:

"Resolved, That The Merchants' Association of New York recommends that the designation 'Made in U. S. A.', in plain type form, be used by all of its members on all goods manufactured by them in the United States of America, and that the use of all other markings to identify the country or origin of such goods be discontinued."

The adoption of such a mark is being urged by the Bureau of Foreign and Domestic Commerce of the Department of Commerce in Washington.

### NEW CALL FOR DRUG SUPPLIES

The Government has called for large supplies of drugs, including 2,500,000 iodine swabs, 50,000 ounces of nitrate of silver and large quantities of camphor which will probably be used in the campaign against Spanish influenza. Bids will be opened Oct. 18.

C. G. Owen, of San Francisco, has been made manager of the Hawaii Fertilizer Company, succeeding Norman Watkins, who has been appointed manager of the American Factors, which recently took over the business of H. Hackfeld & Co. Mr. Owen has been manager of the San Francisco office for some time.

Mr. Garretson of the Aniline department of the Hellenic Chemical & Color Co., Inc., has joined "The Colors." Mr. Knecht of Heller & Merz is now in charge of this department.

## New Incorporations

Charles W. Heilman, Buffalo, N. Y., capital \$10,000. C. W. and R. Heilman, and E. Reineck, Buffalo, N. Y.

Minerva Chemicals Works, Manhattan, capital \$40,000.00. O. Fischer, F. Borgschulte, H. Mattenhorn, 72 Trinity Place, New York.

United Varnish Co., Manhattan, capital \$10,000. M. J. Cahn, C. H. Ross, D. L. Klein, 120 Broadway, New York.

Stewart Chemical and Manufacturing Company, Cincinnati, O., capital \$10,000. Charles E. Saville, A. D. Stewart, Hugo V. Goetz, V. A. Trokell, T. L. Hauer.

Aniline Sales Corporation, Manhattan, capital \$90,000. Dyes, drugs and paints. A. L. Mullaly, W. J. Horgan, G. E. Graham, 180 West 82nd St., New York.

Komover Chemical Manufacturing Company, Cleveland, O., capital \$250,000.

Morel Chemical Co., Manhattan, capital \$10,000. E. I. Douglas, F. C. Allen, M. C. Kahn, 102 West 75th St., New York.

K. T. Chemical Co., York, Pa., capital \$6,000. M. H. Wiker, Lewistown, Pa.

Buffalo Apparatus Corporation, Buffalo, N. Y., capital \$50,000. To manufacture chemical apparatus. R. H. and I. R. Hempleton, and F. B. Turnbull, 466 West Ferry Street, Buffalo, N. Y.

The Lahaud Soap Products Co., Manhattan, capital \$6,000. J. S. Lahaud, M. E. Howatt, C. A. Ferris, 420 Riverside Drive, New York.

Northern Alkali and Chemical Co., Huntington, W. Va., capital \$60,000. Ralph D. Lamis, Huntington; John G. Garvin, Onitagon, Mich.; Alton T. Roberts, Theodore Schneider, and L. E. Garvin, Marquette, Mich.

The Farmers Fertilizer Co., Wingham, Ont., Canada, capital \$50,000. Thomas Tayler, Arthur O. Parker, James E. Stoeckley.

Canada Chemical Works Co., Ltd., Montreal, Canada, capital \$50,000. Raoul O. Grothe, Joseph E. Provost, Hector F. Fortier.

Hacking's, Ltd., Listowel, Ont., Canada, capital \$100,000. To manufacture proprietary medicines. Charles B. Hacking, Elsworth, D. Bolton, John W. Bernie.

Emil Roller Pharmacy, Manhattan, capital \$6,000. E. Roller, J. Hundt, Martha Hundt, 200 West 88th Street, New York.

Spear of Fire Equipment Works, Brooklyn, capital \$10,000. To manufacture chemicals. F. H. Shomburg, W. Metkiff, J. B. Barstolus, 274 Cleveland Street, Brooklyn.

Empire Economy Company, Syracuse, capital \$450,000. Drugs and chemicals. W. F. Whitbeck, L. Blenco, F. E. Whitbeck, Syracuse.

Cool-Ins Oil Co., Manhattan, capital \$70,000. Petroleum and by-products. J. Shulman, H. Kobler, H. Flock, 415 West 128th Street, York.

## NEW WAR SERVICE COMMITTEES

WASHINGTON, D. C., Oct. 1—A number of new war service committees to represent the various branches of the drug and chemical industry in their relations with the Government have been formed by the Chamber of Commerce of the United States at the request of the War Industries Board, while several committees which were among those originally comprising the list have been enlarged.

The officers and board of directors of the Chemical Alliance form the central war service committee of the chemical industry. The various branches of that industry, however, have each formed individual committees, the personnel of which is as follows:

Acids—W. D. Huntington, Davison Chemical Company, Baltimore, chairman; S. B. Fleming, International Agricultural Corporation, New York; J. M. Goethius, General Chemical Company, New York; C. F. Burroughs, F. S. Royster, Guano Company, Norfolk; J. H. D. Rodier, Grasselli Chemical Company, Cleveland; and Charles M. Butterworth, Pennsylvania Salt Company, Philadelphia, Falls, N. Y.

Alkali—J. D. Pennock, Solvay Process Company, Syracuse, N. Y., chairman; E. H. Hooker, Electro-Chemical Company, New York; N. E. Bartlett, Pennsylvania Salt Manufacturing Company, Philadelphia; and E. Sargent, Niagara Alkali Company, Niagara Falls, N. Y.

Coal Tar By-Products—D. W. Jayne, The Barrett Company, New York, chairman; W. D. Addicks, Consolidated Gas Company, New York; C. J. Ramburg, H. Koppers Company, Pittsburgh; W. E. McKay, New England Coke & Gas Company, Boston; and A. A. Schlesinger, Milwaukee Coke & Gas Company, Milwaukee.

Dyestuffs—C. L. Reese, E. I. Du Pont de Nemours & Company, Wilmington, Del., chairman; H. A. Metz, Central Dyestuff & Chemical Company, Newark, N. J.; M. R. Poucher, Du Pont Chemical Company, Wilmington; R. W. Hochstetter, Ault & Viborg, Cincinnati; August Merz, Heller & Merz, Newark; H. D. Ruhm, Marden Orth & Hastings Company, New York; I. F. Stone, National Aniline Company, New York; F. M. Fargo, Calco Chemical

## Want Ads

RATE—Our charge for these **WANT ADS** in this publication, all classifications, is \$1.00 an issue for 20 words or less; additional words, 5c each.

PAYMENT in all cases should accompany the order; add 10c if answers are to be forwarded.

Address, DRUG AND CHEMICAL MARKETS

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New York

EMPLOYEES FURNISHED. Stores sold—also furnished: All State. Positions. Doctors, Dentists, Veterinarians furnished. F. V. KNIEST, Omaha, Neb., Estab. 1904.

WANTED—We are in the market for Cyanide. Quote prices. TUBAL CHEMICAL WORKS, 615 S. Halsted St., Chicago, Ill.

Company, Bound Brook, N. J.; A. R. Curtin, Middlesex Aniline Company, New York, and J. M. Matthews, Grasselli Chemical Company, New York.

Electro-Chemicals—F. A. Lidbury, Oldbury Electro-Chemical Company, Niagara Falls, chairman; C. D. Cohen, American Cyanamid Company, New York; and F. J. Tone, Carborundum Company, Niagara Falls.

Miscellaneous Chemicals—A. G. Rosengarten, Powers-Weightman-Rosengarten Company, Philadelphia, chairman; C. P. Adamson, General Chemical Company, New York; and William Henry Bower, Henry Bower Chemical Company, Philadelphia.

The war service committee of drug manufacturers has been increased by the addition of five members. One member of the original committee is not now listed. The members recently added are W. A. Sails, Sharp & Dohme, Baltimore; Burton T. Bush, Antoine Chiris Company, New York; Dr. H. C. Lovis, Seabury & Johnson, New York; Milton Campbell, H. K. Mulford Company, Philadelphia and Dr. W. C. Abbott, The Abbott Laboratories, Chicago.

No changes have been made in any of the other drug committees.

The committee on pharmacy has been completed and has headquarters in Washington at the office of the chairman, Samuel L. Hilton, Hutton & Hilton. The other members of this committee are A. R. L. Dohme, Sharp & Dohme, Baltimore, and Dr. J. H. Beal, University of Illinois, Urbana, Ill.

## Treasury Decisions

### Board of General Appraisers

A protest by Street & Co. was before the Board of General Appraisers last week. The firm had a large amount of imported rum in warehouse when the Revenue Act of October, 1917, was passed. That statute levied a tax of \$2.10 a gallon on all distilled spirits, domestic and imported, in addition to the tax already exacted. Commissioner of Internal Revenue Roper, with the approval of Secretary McAdoo, directed that this tax be collected by collectors of customs and that the collections be deposited and accounted for as customs. Following the practice which had prevailed, Collector Newton assessed this additional tax on the quantity originally imported and warehoused. The importers protested that this tax should have been on the quantity actually in warehouse at the time of the assessment—the quantity having decreased by evaporation.

When the protest was first on for hearing the Government raised the point that this tax was an internal revenue tax, and as the Board dealt only with tariffs on imports, that it was without jurisdiction to hear the case, and that the legal remedy for importers was in other courts.

Oral argument on this point was had before Board 3, consisting of General Appraisers Waite, Hay and Adamson. The contentions of the Government were presented by Assistant Attorney General Hanson and Special Attorney Mulvaney, while the importers were represented by Albert C. Washburn and Thomas J. Doherty. The members of the Board stated that the matter was one of considerable doubt, and after listening two hours to the arguments presented on both sides, reserved decision.

Reappraisal has been made on crude tartar from Oreste Casighone, Milan, Italy, exported December 3, 1917, and entered at New York on January 10, 1918. File No. 94053. Crude tartar entered at 3.75 francs per kilo, less N. D. charges. Reappraised as entered at 82 per cent.

— Invest in Liberty Bonds —

## THE BAYER COMPANY, Inc.

## Completely Under American Control

In view of the publicity recently given The Bayer Company, Inc., the following statement is made:

The Company is controlled by the Alien Property Custodian and the manufacture and sale of its products are entirely under the supervision of the following officers and directors appointed by him, *all of whom are Americans*:

F. B. LYNCH, *President* G. H. CARNAHAN, *Vice-President*  
E. I. McCLINTOCK, *Secretary and Treasurer*

**Board of Directors:**

**N. F. BRADY**      **G. H. CARNAHAN**      **MARTIN H. GLYNN**      **GEORGE C. HAIGE**  
**F. B. LYNCH**      **E. J. LYNETT**      **C. B. MACDONALD**      **J. R. SPEER**

As soon as its books have been audited and the property appraised, the capital stock of the Company will be sold by the Alien Property Custodian to **American Citizens**.

The proceeds of the sale of the property of the Company will be held by the Alien Property Custodian until the end of the war, when Congress will decide as to the disposition of the money.

All profits as well as all the money realized from the sale of the Company will be used for the purchase of Liberty Bonds to help in the prosecution of the War until the **complete defeat of Germany**.

Therefore, genuine Bayer-Tablets and Capsules of Aspirin as well as other Bayer Products may be purchased with full confidence.

## THE BAYER COMPANY, Inc.

#### Manufacturers of

**BAYER-TABLETS  
AND CAPSULES  
OF ASPIRIN**

## “Heavy Peg”

Five hundred years ago the Hohenzollern dynasty blasted its way into history by means of a big gun,—a super-gun for those days, a twenty-four pounder, no less,—and today it is engaged in blasting its way out of history by the same method. The atrocities which have horrified and sickened the world in the past four years have not been due to a recent psychological obsession of the Prussian caused by the teaching of any Nietsches, Treitschkes, Bernhardis and the like; he has been absolutely true to type.

Five hundred years of robber barons and rapacious Kurfursts; of cynical and atheistic Kings and Kaisers; of ruthless cruelty to enemies and treachery to allies; of servile truckling to the strong and unspeakable brutality to the weak; with hardly a redeeming break in the foul record of centuries, until in these times the Prussian, having learned nothing and forgotten nothing, has undertaken to destroy the liberty and peace of the free nations of the world.

It is to the destruction of this age old menace that this country with its Allies has consecrated itself, and through the lessons of liberty learned at Runnymede and Oxford, at Marston Moor and Naseby, at Waterloo and Trafalgar, at Bunker Hill and Yorktown, has pledged itself to rid the world, once and for all time, of the power of the ruthless strong to oppress and exploit the weak.

It is for this that Great Britain, France and Italy have given unstintedly the best of their manhood, and the uttermost limits of their wealth, and it is for this we have sent nearly two millions of our boys three thousand miles across a reptile infested ocean to do their splendid best in upholding the faith of our forefathers.

And on those of us who are not privileged to bear a part in the front lines, there rests a responsibility no less imperative, no less unavoidable and no less patriotic, of supporting our Government in its duty of carrying on our share of the task which must not for one moment be dimmed, lest those brave nations which have been for a while sunk in the night of destruction and murder shall lose their faith in the right and their hope of a new and brighter dawn.

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Buy Fourth Liberty Loan Bonds.

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